

# 30 Innovative and Effective Ways to Enhance Rural Learning in Africa

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## Introduction

### The complexity of language

'Who shall we ask as local translator?' we asked ourselves when going on our first field visit to central Benin in early 2005. The senior author's local colleagues were not sure. None of them actually spoke all the languages of that region, even those who were born there. But they assured him that all would be fine. Upon arrival in the first village, at least five distinct local languages were spoken and farmers seemed often versatile in several of them. One language was generally understood by all (although not spoken by all). The anticipated problem had resolved itself: the community had come up with its own local translators to facilitate group discussion. Still, the challenges seemed daunting. If a country as small as Benin, with only seven million people, had as many as 70 local languages, how were we to strengthen rural learning for rice across Africa?

### Observation adds confidence

More than in any other profession, farmers constantly adjust their strategies, responding to

emerging needs and opportunities. 'Looking over the fence' is common practice. For instance, when asked how they decided on what seed to use, rice farmers in northern Ghana said they always assessed their neighbours' fields throughout the growing season. If a crop outperformed their own or had an attribute of particular interest, farmers would often attempt to acquire some of their successful neighbour's crop seed to try it out the next season. By that time they are already fairly familiar with its characteristics although they may further test it for yield stability, adaptability and processing traits (in the case of a new variety). Observing the variety regularly in the field and the fact that it has worked for her or his neighbour has given the farmer confidence to test the technology.

### Visibility of a technology

Some technologies are easier to observe and hence to assess than others. Most villagers will know when somebody is trying out a distinct new variety, or when a tractor is tilling somebody's land with a new type of plough. Farmers are also quick in calculating how many

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work-days can be saved by spraying a field with herbicides instead of manually weeding it. But assessing soil fertility and deciding on ways to maintain or improve it is more complicated. While sophisticated, computerized equipment can help Western farmers to fine-tune fertilizer application based on the soil fertility in a particular part of the field, African farmers have to rely on their life-long experience of working the land. Their in-depth knowledge (which often takes into account soil-living organisms, smell, colour and softness of the soil) may be further strengthened through participatory learning with researchers (Defoer, 2002; Ramisch *et al.*, 2006).

### Complexity of a technology

The more complex a technology, the more difficult it becomes to share information about it orally. For instance, integrated pest management skills learned during farmer field schools are not readily passed on to non-participants. For the same reason, there is little evidence that the information required for low external input technology (such as soil-conservation techniques) is transmitted very effectively between farmers (Tripp, 2007). Oral communication has its limitations in conveying complex issues. As sustainable agriculture requires an in-depth understanding of complex relations between farming, nature and society, farmers require additional support to learn.

### Changing contexts

Learning tools and methods also need to consider the dynamism in the system and the shelf-life of the information provided. For instance, farmers may adjust their practices based on a weather forecast (that can be easily communicated through mobile phones or radio), or because of changes in climate. Also, the demographic boom in Africa has resulted in rural-rural migration and contributed to an increasingly complex mosaic of local cultures that may require outside facilitation (Saïdou, 2006). With rural electrification being high on the agenda of many African governments, possibilities for wider use of video and television in agricultural development open up.

### Lasting impressions

In rural areas with a strong oral culture, unusual events are highly debated and leave a lasting impression in people's minds. When Espérance Zossou visited villages in central Benin more than a year after a video on rice parboiling had been publicly screened, women perfectly recalled most of the details of the video. They had even observed secondary details (like the improved stoves) and sought out more information about them (Zossou *et al.*, 2009a). Although the content of the video was merely technical, women strongly appreciated the event as rural entertainment (Zossou *et al.*, 2009b). While filming with rice farmers in Zianso in southern Mali (Fig. 30.1), one of the elders told Van Mele that he was really excited about contributing. It reminded him of his childhood, when outsiders came to his village to show a black-and-white film on a large screen.

### Media and extension revisited

In the 1970s, when the Food and Agriculture Organization of the United Nations (FAO) started to use video as a tool to recover, preserve and reproduce farmers' knowledge, the organization was criticized for using an over-sophisticated medium for a rural setting (Ramírez, 1998). As it turned out, the project paved the way for the use of video as a cost-effective tool to support group training and rural development



**Fig. 30.1.** Lasting impressions are passed on from generation to generation through storytelling. (Photo: P. Van Mele.)

(Coldevin and FAO, 2001). Rather puzzling is that those promoting information and communications technologies (ICTs) often portray video as inappropriate for use in Africa.

Since the 1990s, communication for development has become more decentralized and gained ground on the agenda of international agencies. This coincided with an explosion in the number of private radio stations across the developing world. Projects emphasize closer interactions with farmers and strengthening research–extension–radio linkages (Hambly Odame *et al.*, 2002; Chapman *et al.*, 2003). Although numerous projects have tried to wean researchers and extension staff away from the linear technology-transfer mind set, most radio broadcasters have not yet been exposed to participatory approaches.

Since the early 1990s, many international agencies have turned their aspirations to new ICTs, but results have not met the expectations. The need to re-adjust strategies was acknowledged during an international meeting of media professionals in Brussels that concluded that ‘ICTs are not always the answer to improved information and learning in all circumstances’ (CTA, 2009). The Research into Use programme (Lenné, 2008), and the establishment of the Global Forum for Rural Advisory Services (GFRAS) are but two of the signs that the international community is waking up to address the over-due neglect of rural learning.

In what follows, we address four key challenges in rural learning, namely social inclusion, scaling up, collecting farmer feedback and assessing impact. Experiences from Africa Rice Center (AfricaRice) and partners are presented alongside other relevant experiences.

## **Social Inclusion**

### **Gender inequality in natural-resource use**

In Africa, gender division in rice production is intricately interwoven with land use rights. While men often dominate in irrigated rice systems, women more often cultivate rainfed lowlands. As lowlands are playing an increasingly important role in food security, income

generation, land regulation and sustainable management of natural resources, researching the contexts, mechanisms and outcomes of interventions is crucial (Van Mele *et al.*, 2011b).

Interventions that add value to the land (e.g. water management structures) often result in reallocation of use rights from women to men, as has been the case in The Gambia (Carney, 1998). External facilitation may prove crucial. For instance, wetland improvement schemes in Burkina Faso only succeeded when reallocation policies changed and women’s initial use rights were respected (van Koppen, 2009). Yet, even two decades after the promotion of gender analysis many interventions still fail to address this. One of the reasons is that such experiences are either written up in project reports or in academic literature, both of which are text-based and not easily accessible. Having video documentaries on these topics could help development agencies and communities to anticipate and mediate conflicts over resource use before actual interventions take place.

### **Gender inequality in access to information**

As with any value-adding intervention, differences in access to information may increase the gap between social groups in a community. A heavy emphasis on ICTs without giving proper attention to power relations and marginalized groups is risky and may not be conducive to rural development (Gurumurthy, 2006).

In many cases, development interventions are male-biased because women farmers are restricted by social norms from communicating with men outside their families (Katungi *et al.*, 2008). In Benin, public video screenings created an equal chance for all community members to learn (Zossou *et al.*, 2009b). They strengthened the social capital among women and improved the trust between actors in the rice value chain, a key weakness of markets in Africa (Fafchamps, 2004). Relations between women rice processors, intermediaries and input and output markets improved, and women changed their information-seeking behaviour (Zossou *et al.*, 2010).

## Poverty targeting

Since the early 1990s, farmer training has increasingly targeted groups rather than individuals, mainly driven by donor requirements. Numerous groups mushroomed, often opportunistic and prone to local power plays. Extension efforts were rarely based on a good understanding of local contexts or poverty assessments, which continue to be considered only in impact assessments (Kassam, 2006).

The demand-side and the supply-side of service provision, as well as the organizations and donors supporting this, can benefit from better insights into social inclusion issues in rural learning, especially when scaling up and out.

## Scaling-up and Scaling-out

### Participatory learning and action-research

Although farmers are experimental by nature (Bentley *et al.*, 2010), their opportunities to learn about new ideas and trends are often limited and localized. Few farmers are blessed with the regular visit of an extension agent and even fewer meet a sympathetic researcher willing to listen to their needs or work alongside them over an extended period. The scarce public resources attributed to participatory research must indeed be well targeted and impact pathways carefully assessed from the outset (one of the positive evolutions in allocations of research funds since the late 2000s).

Since 2000, AfricaRice has developed and used participatory learning and action-research (PLAR) with groups of farmers at multiple sites across West Africa. PLAR adopted much of the philosophy of participatory rural appraisal (PRA) (e.g. respect for local agendas and spending long periods of time in villages), as well as several of its tools (e.g. cropping calendars and transect walks). PLAR also adopted weekly meetings and a seed-to-harvest approach from farmer field schools (FFS), but encouraged farmers more to conduct experiments in their own fields on whatever topic they thought relevant for them. At weekly sessions, extension agents encouraged farmers to set up small-scale experiments

with various technical options, including timing of land preparation, mineral fertilizer doses and times of application, water management, new rice varieties, and various ways to control weeds. The manual had 28 modules, chapters corresponding to weekly sessions with farmers (Defoer *et al.*, 2004).

Although groups were often formed for the sake of the PLAR, at times groups themselves articulated demand and adjusted the method to suit their needs, as was the case in Mali (Box 30.1).

However, no matter how well the intentions of a project are made or how well a training manual is written, the attitude of those outsiders facilitating the sessions strongly influences the level of participation and learning.

### Attitude counts

In 2008, an external evaluation of a project funded by the International Fund for Agricultural Research (PADS) related differences in outcomes between Ghana and Mali to differences in attitude of project staff (Van Mele *et al.*, 2011b). In Ghana, the staff thought of PLAR as an extension method for teaching rice technologies to farmers; in Mali, the staff understood that PLAR was an approach for mutual learning and that it was meant to develop and test technical and institutional innovations with farmers. In Ghana, the staff prompted farmers to say they had adopted project recommendations without change. In Mali, the project staff were proud of farmer innovations and asked farmers to describe them to the project evaluators.

PLAR did stimulate farmers to experiment with new ideas and technologies, especially when the facilitators themselves valued these local experiments (Fig. 30.2). It is little surprise that a positive attitude towards farmers' knowledge and practices helped to nurture mutual learning. It was striking, however, that some staff could go through the entire PLAR manual without gaining a respect for farmer experiments.

The complexity of African farming systems, the costs involved in face-to-face extension and the differences in attitudes of service

**Box 30.1.** A group for women

Like many of Mali's villages, Zamblara is semi-arid, with rolling hills. During the brief rainy season of about 5 months, men grow maize, sorghum, groundnuts and other crops on the higher ground. Women grow rice in low-lying, seasonally flooded areas near the villages. During the long dry season, men and women grow vegetables in the low areas after harvesting the rice.

Because rice is grown mainly by women in Zamblara, they formed an association of rice producers in 1997. The women created the association to help themselves develop agricultural practices and to increase their income. The name of the group is 'Kotognogontala', which means 'mutual respect'. The group aims to exchange knowledge and good agricultural practices within the community, and in 2002 they requested the participatory learning and action-research (PLAR) training.

From an original group of 27 people, the association has grown to four groups with 115 women and two men. In Mali, most women's groups have at least some men in them. In this one, the village chief is the honorary president and another man attends to monitor the women's activities. The women say the group has helped improve relations between men and women. The group gives the women a place where they can talk about their problems with men, and give each other advice.

Although the women of Zamblara each have their own small plots of rice land, the group works one collective field of 1.5 hectares. They grow rice in the rainy season and vegetables in the dry season. When the women harvest the rice from this plot they sell some of it and keep the money as a group fund. They divide some of the rice among themselves, and keep the rest to use for their meals during group activities.

PLAR has helped increase rice production in the village, and many of their neighbours are now interested in the new techniques. The four PLAR groups each have a farmer-facilitator. Although the PLAR modules were written in French, they have been (verbally) translated into Bambara (the local language). The women have adapted the content, by composing songs and poems about the rice-farming modules.

Source: Wanvoeke *et al.* (2008). Reproduced with permission from the Centre for Information on Low External Input and Sustainable Agriculture (ILEIA).



**Fig. 30.2.** Learning from farmers requires an open, enquiring and positive attitude towards their knowledge and practices. (Photo: P. Van Mele.)

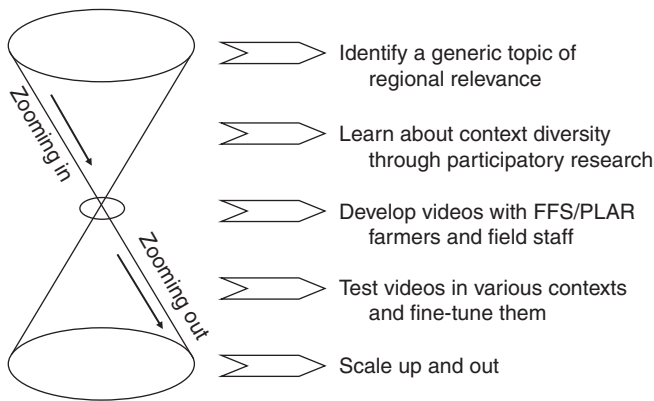
providers further justify the development of farmer-oriented videos to stimulate learning across organizations and across cultures (Van Mele *et al.*, 2010b). The zooming-in zooming-out (ZIZO) approach provides insights as to how to achieve this.

### Zooming-in zooming-out

The ZIZO approach (Fig. 30.3) results in videos that are of regional relevance and locally appropriate (Van Mele, 2006). ZIZO basically revolves around five key steps that are not strictly in chronological order. In particular, the first two may be reversed, or even integrated, depending on the situation.

ZIZO is not a blueprint. No matter how well the video production is planned, the content will change during filming, because of interaction and feedback from farmers. Flexibility and eagerness to learn from people on the ground are crucial.

Since the mid-1980s, there has been a boom of FFS (van den Berg and Jiggins, 2007; FAO, 2008). Their wealth of experiences and regional insights are a gold mine for the development of videos along the ZIZO approach, whereby a number of selected FFS graduates could share their learning in front of the camera.



**Fig. 30.3.** The zooming-in, zooming-out approach. (Modified from Van Mele, 2006.)

An interesting and recurring question from public servants (research or extension) when disseminating the videos to other countries is whether they can change some of the images and the music into local ones, as they (erroneously) believe that this would make the videos more acceptable to their farmers. In fact, civil servants are more likely than farmers to complain about ‘cultural barriers’ in video-mediated learning (Van Mele *et al.*, 2010b). Nigerian farmers, for instance, never complained about the images of Bangladeshi rice farmers or of the music. After all, these same farmers watch Brazilian tele-novelas and Bollywood movies.

Videos made according to the ZIZO approach more easily bridge cultural barriers. Irrespective of the country in which the videos are made, African farmers pay attention to the subject covered. In well-produced videos the pictures tell a story, even if the language is not understood.

**Tackling the dissemination bottleneck**

Appealing to many organizations, the videos were quickly translated into Mandinka. Local language versions boosted local dissemination and use of the videos. Many NGOs, development agencies, farmer organizations, national research and extension staff, as well as radio journalists and TV broadcasters became involved in the translation and national dissemination of the rice videos. By 2010, the rice videos had been translated into 38 African languages (Table 30.1).

**Table 30.1.** African languages into which rice videos have been translated (2010).

Country	Language
Benin	Bariba, Dendi, Fon, Mina
Burkina Faso	Dioula, Mooré
Central African Republic	Sango
Chad	Arabic
DR Congo	Lingala
Ethiopia	Amharec
Ghana	Buli, Dagaari, Dagbani, Ewe, Gonja, Kusaal, Kasem, Sisaala, Twi
Guinea	Guerze, Susu, Pular
Kenya	Swahili
Madagascar	Malagash
Mali	Bambara
Nigeria	Hausa, Igbo, Yoruba
Senegal	Peulh, Wolof
Sierra Leone	Creole, Mende
The Gambia	Mandinka
Uganda	Ateso, Luganda, Lugbara, Luo, Runyakitara

Using either the English, French or local language versions, TV stations started to broadcast the rice videos in The Gambia (GRTV), followed by Uganda (UBC), Guinea (RTG), Nigeria (the federal Nigerian Television Authority as well as the state-owned Broadcasting Service of Ekiti State), Burundi (Télévision Nationale du Burundi), Niger (Canal3 in Malanville), the Democratic Republic of Congo (community television of Kinzau-Mvueté) and Central African Republic (Télévision Centrafricaine).

By 2010, AfricaRice had distributed the videos to over 200 organizations, which in turn multiplied and shared them with over 800 organizations (Table 30.2). Development agencies, networks and projects were most active in disseminating the videos, followed by national research institutes and international NGOs. While universities, schools, networks, rural radio and TV surely contributed to making the videos more widely known, so far we have little evidence of them multiplying and further distributing them.

Rural radio stations made good use of the videos to build the capacities of their own staff, and by promoting them to their audience through regular announcements, showing them in villages or in their station during market days. Others creatively broadcast (parts of) the audio track. Some of the stations sold copies to farmers and some were afraid to make additional copies as they thought the videos were copyright protected.

AfricaRice works closely with the national agricultural research systems (NARS), so most of these received copies direct from AfricaRice. However, extension services and farmers' associations received copies mainly via projects and NGOs, indicating how effective and attractive farmer training materials find their way into the system.

Many still believe that videos cannot be readily viewed by farmers, an attitude more prevalent among senior research staff. However, when farmers are asked what they would do if they were given a video but not the equipment to play it on, most will say that they will 'find a way'.

Indeed, from farmers' feedback we learned that once farmers watched the rice videos they were eager to obtain a copy and were ready to pay for it. As hardly any of the intermediaries responded to this request, AfricaRice decided to adjust its strategy to ensure that the videos reached the intended audience, namely the farmers.

In 2008, AfricaRice partnered with the Canada-based NGO, Farm Radio International (FRI). At first, the rice videos were used as a resource from which radio scripts were developed and shared through its network. Also, radio broadcasters were provided with contact addresses of people at national research institutes and NGOs who had copies of the videos. We hoped that by doing so, new linkages would be established between rural radio stations and agricultural organizations. Again, we struggled to collect feedback and, apart from some anecdotal evidence, we have no idea whether we succeeded in linking organizations in this way.

In 2009, we then agreed for FRI to insert in their newsletter an English or French DVD of *Rice Advice* (containing the rice video programmes) for those members working in rice-growing countries. The network of more than 350 radio organizations that FRI has established since the early 1980s was a great asset to reach (mainly) rural radio stations and local NGOs directly. Out of the 61 respondents to a survey sent out by FRI to all its members in 2010, fourteen said they had never received the DVD, and 22 said that they had used it to strengthen their own capacities. Some radio stations made copies

**Table 30.2.** Number of organizations that received the videos through AfricaRice (first level), or indirectly through any of the recipient organizations, 2010.

Type of organization	First-level distribution	Second-level distribution	Third-level distribution	Total
Development agency	26	25	0	51
International NGO	11	9	0	20
Local NGO	13	73	1	87
Research institute	44	43	1	88
Extension service	29	92	3	124
Farmers' association	17	151	46	214
Project	19	36	4	59
University & school	17	24	0	41
Training centre	0	9	1	10
Rural radio station	32	253	4	289
TV	4	6	0	10
Network	4	20	1	25
<b>Total</b>	<b>216</b>	<b>741</b>	<b>61</b>	<b>1018</b>

of the *Rice Advice* DVD for farmer groups or members of a cooperative credit union. Others used the videos creatively, e.g. by using the audio tracks of the videos, which they had translated into their local language.

At the same time, Countrywise Communication was contracted to establish public–private partnerships for mass multiplication and dissemination of local language videos, using Ghana and Uganda as test cases. This was no easy task. Ensuring the quality of the translated programmes was the first step, as there was a disconnect between the national scientists and the media people doing the translation work, i.e. they do not ‘speak’ the same language. Local media people expected to be told what to do, while scientists did not know the process and work needed for a quality product. As local media companies tend to go for the cheapest option and lowest quality (often not taking agriculture seriously), the voice-over recording and editing in many cases had to be done again and again to improve the standard.

The next issue was getting companies and organizations to understand how the DVD would look, feel and work. Many did not understand what was ‘on offer’ until they saw the finished DVD in multiple languages all on one disc (Fig. 30.4) – at which point the question was, ‘Do you also have this for other crops?’

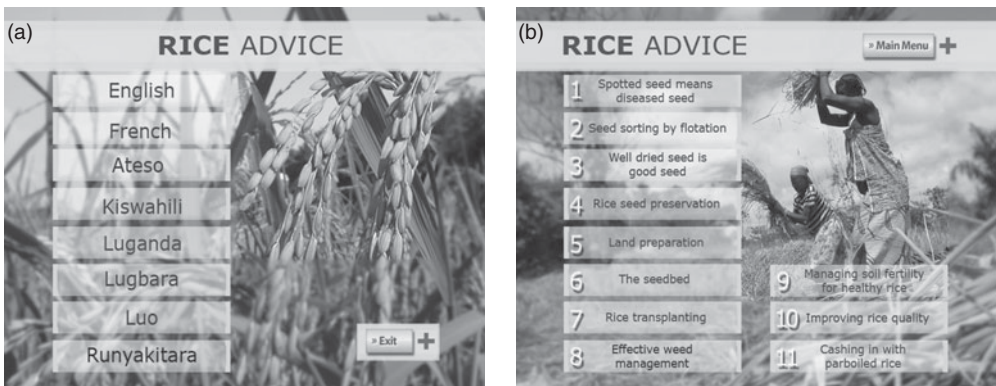
To support the dissemination, private companies were initially reluctant to contribute resources as it was not scheduled in their annual budget plan, or because they had no idea what

the DVD would look like, or because they lacked the vision that supporting the dissemination to farmers was a route to reach out to potential customers. This may change as more and more companies realize that farming can be an area of growth for their business.

Most publicly funded organizations (including NGOs) and private companies offered to use their networks to distribute the DVDs, as they could see the economic benefits to their partners – once they could see what the end product was.

### Integrating media

Exposure to new ideas drives change and farmers rely on multiple sources of information. A recent inventory by the Forum for Agricultural Research in Africa (FARA) shows how the majority of the initiatives around rural ICTs in agriculture, including the use of mobile telephony, is donor or at least externally driven. Moreover, web and text-based information platforms are often in English. As the African farmer is faced with poor infrastructure, low literacy and limited colonial language use, such models of information delivery have proved to be largely ineffective (Gakuru *et al.*, 2009). Audio-visual media can significantly support rural entrepreneurship, as shown by the numerous cases of successful African seed enterprises (Van Mele *et al.*, 2011a), but media is still missing in national and regional agricultural policies.



**Fig. 30.4.** Disseminating learner-centred videos poses specific challenges – many companies and organizations did not know what was ‘on offer’ until they saw the finished DVD with all programmes in multiple languages all on one disc. (Reproduced with permission from Africa Rice Center.)



## Farmer Feedback Mechanisms

Monitoring the dissemination and use of the rice videos has been very time-consuming and has relied mainly on good will, as many of the intermediaries are not formal partners of AfricaRice and hence are not accountable to it or required to report back (Van Mele *et al.*, 2010a). Some donors seem to revert to assessing achievements in terms of numbers of farmers reached or additional income generated. These may be easier to communicate to the tax payer, but assessing impacts of projects that aim at strengthening learning across the system (in which the actors are neither predefined nor often identified after the event, as a result of inter-actor linkages) is much harder.

Farmer organizations offer some potential to provide feedback, but none of them have actually been trained in it. And although modern ICT applications open new opportunities to collect, store and (to some extent) respond to farmers' feedback, problems of synthesis and interpretation of often cryptic messages are likely to limit their scope and applicability.

Timely field visits by professionals with a readiness to listen and learn from farmers will remain crucial to understand, document and, in turn, inspire learning-oriented interventions.

## Impacts

Household impact assessments of the rice videos are ongoing in Africa, although two studies already provide a clear indication. In Bangladesh,

video-mediated group learning about improving the quality of farm-saved seed resulted in farmers' rice yields increasing by an average of 15% (Table 30.3; Chowdhury *et al.*, 2011). After video exposure, marginal and rice subsistence households decreased by 5% and 19%, respectively.

In central Benin, about 69% of the women interviewed were illiterate and nearly all of the women who watched the parboiling video improved their techniques, and therefore the quality of their rice (Zossou *et al.*, 2009a), leading to a 35% increase in price per kg rice sold (Table 30.3).

Women in Benin who watched the videos became motivated to parboil more and improve the quality of rice. The NGOs, impressed by their efforts, helped the women to improve the packaging of parboiled rice and link them to traders. Improved marketing led to increased business. Their rice attracted more buyers and fetched a higher price, which increased the women's profits and strengthened their social cohesion (Zossou *et al.*, 2010).

The video motivated women to start parboiling as a group and to make group-based requests for credit and training (Table 30.4). However, when local NGOs responded by facilitating access to microfinance institutions, these were often unwilling to provide credit to the groups because of past bad experiences in the cotton sector. Instead, informal credit suppliers proved more responsive. Rice producers who attended the open-air video shows together with the women rice processors became more willing to sell them rice on credit (Zossou *et al.*, 2010).

**Table 30.3.** Changes in rice yield in Bangladesh<sup>a</sup> and price per kg of parboiled rice in Benin<sup>b</sup> after watching different rice videos.

Rice video modules	Video villages		Control villages	
	Before	After	Before	After
Seed management and seedling production <sup>a</sup>	4593 kg/ha	5265 kg/ha Yield increase of 15% ( $P < 0.001$ )	4667 kg/ha	4678 kg/ha Non-significant change
Rice quality and parboiling <sup>b</sup>	US\$0.55/kg	\$0.74/kg Price increase of 35% ( $P < 0.001$ )	\$0.63/kg	\$0.64/kg Non-significant change

<sup>a</sup>Data from Chowdhury *et al.*, 2011.

<sup>b</sup>Data from Espérance Zossou, 2009, unpublished.

**Table 30.4.** Behavioural and institutional changes triggered by the parboiling video. (From Zossou *et al.*, 2010, reproduced with permission from Taylor & Francis Ltd, [www.informaworld.com](http://www.informaworld.com).)

Types of change	Description of the change	Indicator	Factors that triggered change
Behavioural change	Women had increased motivation to parboil rice	After viewing video, 72% of women became highly motivated to parboil rice	Women realized after watching the video that parboiling was a widespread technology and there was a much larger market for it than they initially realized
	Women developed rice parboiling activity for profit	88% of women who viewed the video parboiled rice for profit. Viewers parboiled 70% more rice than those who didn't watch the video	Improved rice quality by using improved parboiling technologies led to an increase in consumer demand
	Women increasingly organized themselves in groups to parboil rice	81% of women who viewed the video parboiled rice in groups after the video show	In some cases, the gift of an improved parboiler for a whole village improved women grouping around rice parboiling Being organized in groups increased trust and facilitated access to informal credit
	Women formulated group-based requests for new training	188 women were trained on the construction and use of improved stoves (that they discovered in the video) and more rice parboiling training was carried out upon women's requests	The discovery of improved stove during video shows led to women's interest in ecological problems during rice parboiling The increasing interest of women led them to seek more information about parboiling
Behavioural and institutional changes	Intermediaries improved their training methods	NGOs strengthened their role as facilitators NGOs increasingly used pictures in their training to capture attention NGO facilitators helped women to better organize themselves	The increasing interest of women in rice parboiling The increasing demands to support rice parboiling The increasing trust of women in NGOs led NGOs to improve their methods and to help women to better organize themselves
Institutional changes	Collaboration strengthened between rural women and input and output markets	Relations between women and credit institutions were improved Relations between women and private-sector traders and sellers were improved	Trust between various actors in the value chain is strengthened by: video shows; women's interest in rice parboiling; and increased demand for parboiled rice

## Conclusion

The rice videos discussed in this chapter have demonstrated their power to trigger livelihood changes in multiple countries way beyond improved knowledge, yields and incomes.

As Tripp (2007) says, more robust rural institutions are required to help generate and share relevant information in ways that are sensitive to farmers' busy schedules. Agro-dealers, information centres, plant clinics and radio stations that are near rural markets where farmers commonly gather may be well-suited as rural learning hubs and as places where local language videos can be sold to farmers. Allowing farmers to watch a video or listen to an audio programme at their own convenience helps to reduce farmers' dependency on outside organizations, and at the same time triggers their interest to learn more. Rather than making service providers superfluous, we believe video-mediated rural learning will rather create demand for new services and products.

Rural learning will increasingly need to enhance farmers' and intermediaries' search behaviour (both for information and for potential partners). Apart from technical aspects, institutional innovations related to collective action in natural-resources management, saving and credit cooperatives, marketing and value-chain innovations need to be considered. Here as well, video-mediated learning can pave the way to enhance learning across frontiers. Optimal use should be made of available resources and networks, as too much audio and video material is being 'lost' because it is not shared. To address this, the NGO Access Agriculture was established and created a unique video- and audio-sharing platform.

And finally, more research is needed on the relations between context, mechanisms and outcomes of rural learning. Insights gained will strengthen socially inclusive mechanisms to reach communities with quality audio and video programmes. After all, a good programme is like a good technology: useless if it remains on the shelf.

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