

Enhancing rural learning, linkages, and institutions: the rice videos in Africa

*Paul Van Mele, Jonas Wanvoeke, and
Espérance Zossou*

Africa Rice Center (WARDA) facilitated the development and translation of 11 rice videos. From 2005 to 2009, WARDA partners translated them into more than 30 African languages. Open-air video presentations enhanced learning, experimentation, confidence, trust, and group cohesion among rural people. The videos strengthened capacities of more than 500 organisations and hundreds of thousands of farmers. WARDA's integrated rural learning approach also helped women to access new markets and credit. Learning videos allow for unsupervised learning; unleash local creativity and experimentation; facilitate institutional innovations; and improve social inclusion of the poor, youth, and women.

Améliorer l'apprentissage, les liens et les institutions en milieu rural : les vidéos sur le riz en Afrique

Le Centre du riz pour l'Afrique (ADRAO) a facilité le développement et la traduction de 11 vidéos sur le riz. Entre 2005 et 2009, les partenaires de l'ADRAO les ont traduites en 30 langues africaines. Des spectacles vidéo en plein air ont amélioré l'apprentissage, l'expérimentation, l'assurance, la confiance et la cohésion des groupes au sein de la population rurale. Les vidéos ont renforcé les capacités de plus de 500 organisations et de centaines de milliers d'agriculteurs. L'approche intégrée d'apprentissage rural de l'ADRAO a par ailleurs aidé les femmes à accéder à de nouveaux marchés et au crédit. Les vidéos d'apprentissage permettent l'apprentissage non supervisé; déclenchent la créativité et l'expérimentation au niveau local; facilitent les innovations institutionnelles; et améliorent l'inclusion sociale des pauvres, des jeunes et des femmes.

Aumentando o aprendizado rural, vínculos e instituições: os vídeos sobre arroz na África

O Africa Rice Center (WARDA) promoveu a criação e tradução de onze vídeos sobre arroz. De 2005 a 2009, parceiros do WARDA fizeram a tradução deles para 30 idiomas africanos. Shows de vídeo em céu aberto melhoraram o aprendizado, as experiências, a segurança, a confiança e a coesão de grupos entre as pessoas da área rural. Os vídeos fortaleceram a capacidade de mais de 500 organizações e milhares de produtores rurais. A abordagem de aprendizado rural do WARDA também ajudou as mulheres a terem acesso a novos mercados e crédito. Vídeos de aprendizado permitir aprendizado sem supervisão promover a criatividade e experimentação local; facilitar as inovações institucionais e melhorar a inclusão social dos pobres, jovens e mulheres.

Para mejorar el aprendizaje, los vínculos y las instituciones en el campo: videos sobre arroz en África

El Centro Africano del Arroz (CAA) elaboró y tradujo once videos sobre arroz. De 2005 a 2009, las contrapartes de CAA tradujeron los videos a 30 idiomas africanos. Estos videos, rodados sobre el terreno, muestran los avances en el aprendizaje, la práctica, la confianza y la cohesión grupal entre campesinos. Los videos contribuyeron a que más de 500 organizaciones y cientos de miles de campesinos mejoraran su práctica. El método del CAA, centrado en el aprendizaje rural integral, también ayudó a que las mujeres tuvieran acceso a nuevos mercados y a préstamos. Los videos de aprendizaje: (1) permiten la enseñanza autónoma; (2) despiertan la creatividad y la experimentación local; (3) facilitan la innovación en las instituciones; y (4) promueven la participación de los pobres, los jóvenes y las mujeres.

KEY WORDS: Gender and diversity; Labour and livelihoods; Methods; Technology; Sub-Saharan Africa

Introduction

The role of media in rural development has long been recognised, but opinions differ about the appropriateness of the various media. While most international agencies are turning their aspirations to new Information, Communication, and Technology (ICT) media, old media like press, radio, and video seem to be, by and large, ignored. A heavy emphasis on ICTs without giving proper attention to power relations and marginalised groups is risky and may not be conducive to rural development (Gurumurthy 2006).

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 organisation was criticised 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 (Coldevin and FAO 2001). It is rather puzzling that those who promote ICTs often portray video as inappropriate for use in Africa.

From the 1990s, as the Farmer First movement began to affect the way in which research is conducted (Pretty and Chambers 1994), communication for development became more decentralised and gained ground on the agenda of international agencies. This resulted in an explosion in the number of radio stations across the developing world. Recent projects emphasise closer interactions with farmers and the strengthening of research–extension–radio linkages (Odame *et al.* 2002; Chapman *et al.* 2003). Although numerous efforts tried to wean researchers and extension staff off the linear technology-transfer mindset, most radio broadcasters have not been exposed to participatory approaches.

Across the board, the potential role of radio and video in strengthening agricultural innovation systems has not been fully explored. In this article, we present on-going work by Africa Rice Center (WARDA) and partners.¹ Attention is paid to the ways in which video complements rural radio in enhancing learning, linkages, and institutions: the three pillars of an innovation system (see also <http://www.warda.org/warda/p3-rurallearning.asp>). We conclude by addressing some issues of social exclusion arising with the use of media, and we present potential ways to overcome these.

Video development

Stimulated through video-mediated learning, rural Bangladeshi women created their own solutions to improve the quality of farm-saved seed (Van Mele *et al.* 2007). The impact of

the videos led a women's NGO and various women's groups to decide to establish their own rice-seed enterprises (AKM Zakaria, personal communication).

Inspired by a values-based research and development project (PETRRA) in Bangladesh (Van Mele *et al.* 2005a; Salahuddin *et al.* 2008), the first author joined WARDA in 2005; here he leads a programme that focuses on facilitating and analysing processes which strengthen learning, linkages, and institutions within the rice sector. The introduction of the Bangladeshi rice-seed videos in Africa encountered mainly institutional problems that were only gradually overcome (Van Mele *et al.* 2010). Responding to enthusiastic feedback from rural African women who had watched these videos, WARDA decided that more of them were needed.

In collaboration with Countrywise Communication, a private company specialising in video and multimedia training for agriculture and rural development, a video team was trained in Benin during a two-week session in 2005. The intricacies of producing videos with rural communities are described in Van Mele *et al.* (2005b).

To ensure that technologies were appropriate, and to break down communication barriers between the production team and the end-users or intended audiences, WARDA and partners involved rural women and men in developing and validating both the technologies and the video scripts. Discovery-learning principles were applied to introduce scientific concepts, such as solubility of mineral fertiliser. Although the video team adhered to the principles of adult learning, neither the filming nor the editing was handed over to the community, as is the practice in participatory video projects.

By 2009, 11 rice videos were available, dealing with seed sorting, flotation, drying, and storage (made in Bangladesh); rice quality and parboiling (made in Benin); land preparation (made in Burkina Faso); and seedbed preparation, transplanting, weeding, and soil-fertility management (made in Mali).

Locally appropriate and regionally relevant videos

To guide other organisations that are interested in producing high-quality learning tools that are locally appropriate and regionally relevant, WARDA developed the 'zooming-in, zooming-out' (ZIZO) approach. One starts off with a topic of regional relevance and subsequently ensures that farmers are engaged in learning and modifying technologies and adding their own creative input. Once this is done, a video is made with some of those farmers. The draft videos are then again tested in other communities to fine-tune them before scaling them up to regional level (Van Mele 2006).

Adhering to the ZIZO approach makes it easier to break down cultural barriers. Irrespective of the country in which the videos were made, African farmers did pay attention to the subject covered. For instance, farmers in Guinea were surprised that 'those foreigners [Bangladeshi farmers] are as poor as we are and they face similar problems'. Seeing how farmers at the other end of the world had devised simple and practical solutions proved an important source of motivation for African farmers to start experimenting themselves.

The video on rice quality, made in Benin, was quickly translated into Mandinka and broadcast by Gambian national television. Independently, Uganda and Nigeria followed the same example. By January 2009, five new videos on integrated rice management had been developed in Mali and Burkina Faso, in collaboration with farmers who had taken part in weekly sessions of participatory learning and action research (PLAR). In less than two months, WARDA partners in 12 countries had started translating them into local languages, indicating the enthusiasm created with the earlier rice video programmes. An overview of the languages into which the videos are translated is given in Table 1.

Table 1: Languages into which videos are translated (2009)

West Africa	East Africa
French, Mandinka, Susu, Guerze, Creole, Bambara, Sonrai, Twi, Ewe, Dagaari, Buli, Yoruba, Igbo, Hausa, Fon, Mina, Dendi, Bariba, More, Peulh, Wolof	Luganda, Runyakitara, Luo, Ateso, Amharec, Swahili*, Lingala*, Malagasy* and Ikinyarwanda*

*On-going

Enhancing learning and experimentation

As part of her MSc research, Zossou interviewed 200 women, 17 women’s groups, and staff of local NGOs in 20 villages in central Benin, where rice parboiling is a principal income-generating activity for women. Where the NGOs had shown the video on rice parboiling, more than half of the women started to use improved parboilers to which the NGOs had facilitated access. Nearly all who had seen the video but did not have access to the improved parboiler started to apply the principles of parboiling by steam. They also paid attention to ways of reducing the loss of steam and they used local resources innovatively to conserve energy. They all improved the quality of their parboiled rice, for example by removing dirt, washing rice several times, and drying it on tarpaulins. Training workshops and learning from their peers proved less powerful in changing behaviours and strengthening rural women’s capacity to innovate (Zossou *et al.* 2009).

Learning and experimentation took place also at the system level. Prosper Monde, who coordinates the Question & Answer Service in Benin, provided copies of the videos to some rural radio broadcasters and informed us that the recipients were very receptive. In response WARDA started to look for multiple ways in which interactions between radio and video could be enhanced. In March 2009, WARDA gave copies of the rice videos to various rural radio stations in rice-growing areas in Benin. Within a week, three of them had called us to say that they had already organised an open-air show in their community.

Creating new linkages between actors

Within the quickly changing context of the rice sector in Africa, many new players have entered the field. Enhancing learning and linkages among all these actors has become a particularly important challenge. Although historically WARDA focused on technology- and policy-oriented research, it is gradually assuming an additional role as a knowledge broker at the regional level.

To better understand how uptake pathways function and what spontaneous linkages can emerge, WARDA distributed the rice videos to 158 organisations and monitored their use. Across Africa, the videos strengthened capacities of more than 500 organisations (see Table 2). Development agencies were most active in multiplying the video CDs, followed by projects, national research institutes, and international NGOs. Whereas universities, schools, networks, rural radio, and TV surely contributed to making the videos more widely known, so far we have no evidence of them multiplying and further distributing the videos. Monitoring these flows has proven very time-consuming, as many actors are not formal partners of WARDA and hence are not accountable to it or required to report back.

Responding to positive feedback on the rice videos from some radio broadcasters, in 2008 WARDA entered into a partnership with the Canada-based NGO, Farm Radio International (FRI). The videos were used as a resource from which radio scripts were developed. Each

Table 2: Organisations that received rice videos from WARDA (first level) and from parties who in turn multiplied and distributed them (second and third level) (February 2009)

Type of organisation	First-*level distribution	Second-level distribution	Third-level distribution	Total
Development agency	18	21	0	39
International NGO	8	8	0	16
Local NGO	10	12	1	23
Research institute	32	15	1	48
Extension service	22	45	3	70
Farmer association	9	146	21	176
Project	16	31	4	51
University & school	14	7	0	21
Training centre	0	3	1	4
Rural radio	27	6	4	37
TV	1	4	0	5
Network	1	8	1	10
Total	158	306	36	500

*Note that there is no causal relationship between first-, second-, and third-level distribution as the data only show who received the videos, not from whom they received them. Projects, for instance, were instrumental in multiplying and distributing copies to extension services, farmer associations, and other projects.

script ended with an announcement that rice videos also existed on the same topic. FRI sent out a special package containing scripts devoted to rice in Africa to more than 300 rural radio stations. In this package, a list of distribution points enables radio broadcasters to announce where the rice videos can be obtained. For each country one government agency and one NGO were given copies. Monitoring is on-going, but early evidence shows that actors previously unknown to each other are getting linked up. A request for a video VCD or DVD is a good way for the interested parties to get to know each other and to explore common interests.

By early 2009, 176 farmer organisations had copies of the rice videos, mostly obtained from third parties. A farmers' organisation in southern Benin received a copy of the rice videos when taking part in a training workshop organised by the national agricultural research institute (INRAB). On their own initiative they multiplied copies for their members. Farmers spontaneously started organising video shows, finding the necessary equipment, such as a generator and video player, through their own informal networks. To enhance farmers' access to the videos, WARDA currently explores equitable formulas of video distribution via the private sector, which in turn may work with rural radio stations as sales outlets.

Influencing rural institutions

Male researchers from various countries indicated that they were impressed with some of the local innovations shown in the videos and had changed their mind about working with farmers. As women feature strongly in all videos, the project also triggered them to engage with women's groups. As radio broadcasters often have little experience in collaborative

learning, we believe the rice videos can help to create a more appreciative attitude towards rural people's realities and creativity.

After local NGOs had shown the videos about rice parboiling and rice quality in Benin villages where they already worked, their relationship with rural women improved. The NGOs started to help women to formulate requests for training in building improved stoves, and to seek financial assistance to buy inputs (for example, paddy rice and improved parboilers). NGO facilitators strengthened their own capacities and improved their knowledge in order to work more efficiently. Realising the importance of images when working with non-literate women, the local NGOs increasingly used visual aids during their interactions with women.

The NGOs subsequently facilitated official registrations of women's organisation with microfinance institutions, because easy access to credit is important in order to expand the parboiling activity into a viable enterprise. To sustain these emerging enterprises, NGOs also assisted women groups to purchase paddy rice on credit.

Initially, women in Benin encountered difficulties in marketing their parboiled rice. After the video shows had resulted in improvements in the quality of the rice, NGOs identified traders and sellers interested in parboiled rice and facilitated their contact with women's organisations. NGOs helped women to improve the packaging of their parboiled rice. Improved marketing increased people's awareness of the importance of local rice. These women rice processors currently sell their services to a range of organisations for the training of others, and they provide their services to NGOs that promote parboiled rice in urban areas.

Conclusion

Adoption of new techniques that is fuelled only by extension messages may be short-lived (Bentley 2009). While rural radio reaches a larger audience than video and is ideally suited to pass on messages and inform people about whom to contact for certain topics, video is more powerful for enhancing learning among rural communities and service providers.

Most extension agents in developing countries are men, and multiple institutional and organisational problems constrain attempts to train rural women (Jiggins *et al.* 1997). Although the use of radio and video has changed in response to new approaches to development, Norrish (1998) pointed to the danger of creating new exclusion zones, mainly affecting women and children. By giving rural women a voice through video, and disseminating these videos through grassroots organisations and rural radio stations, we believe that these hurdles can be partly overcome.

To avoid social exclusion, the marginalised poor, women, and youth need to be actively involved not only in the creation of agricultural technologies, but also in shaping the communication tools and strategies. Future research will need to indicate how the integration of various media and uptake pathways best contributes to a more inclusive development process.

Acknowledgements

We thank the International Fund for Agricultural Development (IFAD), the Government of Japan, and the Bill & Melinda Gates Foundation (BMGF) for their financial and moral support for WARDA's integrated rural learning approach.

Note

1. In late 2009, WARDA changed its name to AfricaRice. Its full name – Africa Rice Center – remains unchanged.

References

- Bentley, J. W.** (2009) 'Impact of IPM extension for smallholder farmers in the tropics', in R. Peshin and A. K. Dhawan (eds.) *Integrated Pest Management. Volume 2: Dissemination and Impact*, New York, NY: Springer.
- Chapman, R., R. Blench, G. Kranjac-Berisavljevic, and A.B.T. Zakariah** (2003) 'Rural radio in agricultural extension: the example of vernacular radio programmes on soil and water conservation in N. Ghana', *AgREN Network Paper 127*: 15, London: ODI.
- Coldevin, G. and FAO** (2001) 'Participatory communication and adult learning for rural development', *Journal of International Communication* 7 (2): 51–69.
- Gurumurthy, A.** (2006) 'Promoting gender equality? Some development-related uses of ICTs by women', *Development in Practice* 16 (6): 611–16.
- Jiggins, J., R. K. Samanta, and J. E. Olawoye** (1997) 'Improving women farmers' access to extension services', in B. E. Swanson, R. P. Bentz, and A. J. Sofrancko (eds.) *Improving Agricultural Extension: A Reference Manual*, Rome: FAO.
- Norrish, P.** (1998) 'Radio and video for development', in D. Richardson and L. Paisley (eds.) *The First Mile of Connectivity*, Rome: FAO.
- Odame, H., N. Hafkin, G. Wesseler, and I. Boto** (2002) 'Gender and agriculture in the information society', *International Service for National Agricultural Research, ISNAR Paper No. 55*: 8, The Hague: ISNAR.
- Pretty, J. N. and R. Chambers** (1994) 'Towards a learning paradigm: new professionalism and institutions for agriculture', in I. Scoones, J. Thompson, and R. Chambers (eds.) *Beyond Farmer First: Rural People's Knowledge, Agricultural Research and Extension Practice*, London: Intermediate Technology Publications.
- Ramírez, R.** (1998) 'Communication: a meeting ground for sustainable development', in D. Richardson and L. Paisley (eds.) *The First Mile of Connectivity*, Rome: FAO.
- Salahuddin, A., P. Van Mele, and N. P. Magor** (2008) 'Pro-poor values in agricultural research management: PETRRA experiences in practice', *Development in Practice* 18 (4 & 5): 619–26.
- Van Mele, P.** (2006) 'Zooming-in, zooming-out: a novel method to scale up local innovations and sustainable technologies', *International Journal of Agricultural Sustainability* 4 (2): 131–42.
- Van Mele, P., A. Salahuddin, and N. P. Magor** (eds.) (2005a) *Innovations in Rural Extension: Case Studies from Bangladesh*, Wallingford: CABI Publishing.
- Van Mele, P., A. K. M. Zakaria, R. Nasrin, B. Chakraborty, M. M. Haque, and J. Rodgers** (2005b) 'Bringing science to life: video development for women-to-women extension', in P. Van Mele, A. Salahuddin, and N. P. Magor (eds.) (2005a).
- Van Mele, P., A. K. M. Zakaria, Hosne-Ara-Begum, Harun-Ar-Rashid, and N. P. Magor** (2007) 'Videos that strengthen rural women's capability to innovate', *Communication for Development and Social Change* 1 (3): 273–93.
- Van Mele, P., J. Wanvoeke, C. Akakpo, R. M. Dacko, M. Ceesay, L. Béavogui, and R. Anyang** (2010) 'Overcoming cultural and institutional barriers in technology-mediated rural learning: using video to bridge Asia and Africa', *Journal of Agricultural Education and Extension* (in press).
- Zossou, E., P. Van Mele, S. D. Vodouhe, and J. Wanvoeke** (2009) 'The power of video to trigger innovation: rice processing in central Benin', *International Journal of Agricultural Sustainability* 7 (2): 119–29.

The authors

Paul Van Mele (corresponding author) is Program leader, Learning and Innovation Systems at the Africa Rice Center (AfricaRice) in Benin. He has worked for nearly 20 years in international research and development. His research interests include processes to enhance system linkages, local innovations, and scaling up of collaborative learning through video and rural radio. <p.vanmele@cgiar.org>

Jonas Wanvoeke is research assistant in the Learning and Innovation Systems Program at the Africa Rice Center (AfricaRice). In 2003, he obtained his MSc in Management of Agricultural Knowledge Systems

(MAKS) at Wageningen University, after which he worked for several years with grassroots organisations before joining WARDA. <j.wanvoeke@cgiar.org>

Espérance Zossou is post-master in the Learning and Innovation Systems Program at the Africa Rice Center (AfricaRice). She obtained her MSc degree at the University of Abomey-Calavi, Benin. Her thesis analysed how video triggered technological, organisational, and methodological innovations among women rice processors and service providers in central Benin. <e.zossou@cgiar.org>