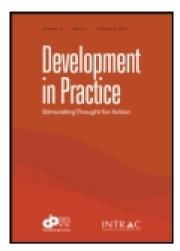
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# Videos that speak for themselves: when non-extensionists show agricultural videos to large audiences

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#### NOTE

## Videos that speak for themselves: when non-extensionists show agricultural videos to large audiences

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In 2008, an NGO showed videos about rice to farmers in 19 villages in Benin. A study in 2013 showed that farmers remembered the videos, even after five years had passed. In most of the villages at least some farmers experimented with rice farming or with new technology after the video screenings, which attracted large audiences of community members, including youth and women. Some of the villagers also visited extension agencies to get rice seed, and occasionally to seek more information. Farmers can benefit from agricultural learning videos shown by organisations with little previous agricultural experience. Videos do not necessarily need to be facilitated by an expert who knows the subject. Sometimes the video can speak for itself.

En 2008, une ONG a présenté des vidéos sur le riz à des agriculteurs de 19 villages du Bénin. En 2013, une étude a montré que les agriculteurs se souvenaient des vidéos, même cinq ans plus tard. Dans la plupart des villages, au moins quelques agriculteurs ont tenté la riziculture et ont essayé de nouvelles technologies après avoir vu les vidéos, qui ont attiré de nombreux membres de la communauté, y compris des jeunes et des femmes. Certains des villageois se sont par ailleurs rendus auprès d'agences de vulgarisation pour se procurer des graines de riz et, à l'occasion, pour demander des informations supplémentaires. Les agriculteurs peuvent profiter de vidéos agricoles instructives présentées par des organisations qui n'ont guère d'expérience en matière d'agriculture. La présentation de ces vidéos ne doit pas forcément être facilitée par un expert en la matière. Parfois, la vidéo se passe de commentaires.

En 2008, una ONG presentó a campesinos de 19 comunidades de Benín varios videos sobre el cultivo de arroz. Esta presentación atrajo a un público grande de las comunidades, en el que se incluían jóvenes y mujeres. Un estudio realizado en 2013 mostró que, aun después de transcurridos cinco años, los campesinos recordaban dichos videos, constatándose que en la mayoría de las aldeas algunos campesinos habían experimentado con el cultivo de arroz o con el uso de tecnologías nuevas. Asimismo, algunos visitaron agencias de extensión para obtener semilla de arroz y, en ocasiones, para buscar información adicional. Se comprobó que los campesinos pueden beneficiarse de los videos de capacitación agrícola, aun cuando estos no sean presentados por organizaciones con mucha experiencia previa en la agricultura. En este sentido, la presentación de videos no requiere la facilitación por parte de un experto conocedor del tema, pues a veces pueden hablar por sí mismos.

**Keywords:** Aid – Monitoring and Evaluation; Civil society – NGOs; Environment (built and natural) – Agriculture; Technology – ICT; Media; Methods; Sub-Saharan Africa

#### Introduction

As videos are being used more often to exchange ideas with smallholder farmers, new questions emerge: (1) Do farmers remember videos, years after having watched them? (2) Can videos

trigger technical change in agriculture, e.g., farmer experiments? (3) Do agricultural training videos stimulate farmers to make institutional changes, e.g., to seek out additional advice and inputs and to experiment? and (4) Must agricultural learning videos be "facilitated" by an extensionist who has mastered the topics presented in the videos and can answer questions?

From February to September 2008, Paul Van Mele, then at the Africa Rice Center (AfricaRice) in Cotonou, Benin, contracted an NGO called "Association Béninoise du Cinéma Numérique Ambulant" (CNA) to reach farmers in 19 villages through large, open-air video shows in the south (Department of Mono) and north (Department of Atacora) of Benin. Farmers saw four videos filmed in Bangladesh (on hand sorting and floating rice seed, on seed drying and storage) and two videos made in Benin on rice parboiling and post-harvest rice quality. Readers can download these videos at www.accessagriculture.org.

CNA included the rice videos in their evening video screenings to raise awareness of AIDS, child labour, and women's rights: 10 visits a year to 19 villages. In the villages, CNA drove to each village in the afternoon and set up a large outdoor screen in the village centre. An early evening screening in the public space of the village is the most inclusive way to show a video; e.g., it is the most convenient time and place for women to attend. CNA started the evening programme by playing modern African music to attract the audience. As soon as it was dark enough to see the movie, CNA showed a 20-minute comic short (e.g., Buster Keaton or Laurel and Hardy) followed by the rice films, a question and answer session on the video, and then a contemporary, full-length African feature film. The films were shown during the long, West African dry season, when rainfall is highly unlikely. In the north, in the Department of Atacora, CNA showed the rice videos in nine villages. In the south CNA showed the rice videos just once, over four evenings. In the north they showed all of the rice videos one evening, and showed them all again another evening.

The videos had not yet been translated into local languages, so the French versions were shown and the facilitators translated them over the microphone and discussed the videos during question and answer sessions.

CNA's experience is unusual because they had no previous experience in agriculture; neither did they have a long-standing engagement with any of the communities (as most NGOs or national extension staff would have). But CNA are experts in going to villages and showing videos on sensitive social issues like child trafficking and wife beating. This paper only discusses the audience's reaction to the rice videos, not to the ones on domestic violence. CNA planned the screenings carefully and had them announced by a town-crier or "crieur public". As video becomes more popular in training farmers, more non-agricultural agencies will be able to show agricultural training videos in rural communities, infringing on the role of extension services, so it is important to know how videos will be received without the aid of skilled agriculturalists to answer questions and guide discussions. In 2007, the authors thought that agricultural learning videos needed a facilitator to answer questions from the farmer audience. In our earlier experience in Bangladesh, the videos were facilitated by a person (usually a university-educated agronomist) who could answer the audience's questions and lead discussion. It seemed helpful, and a review sponsored by the FAO suggested that a facilitator was important for screenings of videos for farmers, even suggesting writing guidelines for video facilitators (Lie and Mandler 2009). But as we see in this study, expert facilitation is not always necessary. At least sometimes the video is good enough to speak for itself.

In this paper, "high-quality video" is defined as one which is designed with scientific information that is new to farmers, but presented by farmers who have mastered this new information over a number of seasons and added their own innovations to it. The zooming-in, zooming-out method is designed to produce just such a video (Van Mele 2006). The first step is to write a script and revise it carefully. Technical experts and farmers who have experience with the new

technologies are consulted often during the script development. Farmer experimenters appear on camera, and describe their innovations. The video is professionally filmed and edited, and the sound is audible. A final script is made to aid translation to other languages.

Sound advice in a high-quality video may need no extensionist to explain the information. After all, in most countries much information is delivered to TV viewers on the evening news, without outside facilitation. While videos can reach many people, the audiences also find videos more convincing than an extensionist giving a talk (Hilou 2012). Farmers appearing on video can be even more convincing, even if they are foreigners. Farmers in Nigeria, for example, liked rice videos from Bangladesh as much or more than the ones filmed in nearby Mali (Bentley and Van Mele 2011).

Learning videos stimulate innovation by giving farmers new ideas to apply creatively. In Bangladesh, research in 28 video villages and four control villages showed that women who watched videos on rice seed did more experiments, adopted more innovations, and found ways to sell seed and to bargain for better prices. The women reduced their seed rate by almost half (lowering their production costs). The seed they produced was brighter, healthier, and easier to sell. There were no changes in the control villages. In the video villages, rice yields increased by 15% and over 20% of the households attained rice self-sufficiency, with no changes in control villages. The women who saw videos also more confidently sought and shared new knowledge with service providers and others in the community (Chowdhury, Van Mele, and Hauser 2011).

#### Method

The field study covered nine villages in the north and ten in the south of Benin, in February 2013, five years after CNA organised the first rice video shows. The authors visited the villages and held semi-structured group interviews. Facilitators from CNA provided translation from French to Mina, Watchi, Waama, Natendi, Dendi, Lokpa, Detamari, and Bariba. The visits lasted between an hour and two hours. One or two focus group discussions were held per village and there was almost always a visit to a field or a food processing area in the village, to reconfirm what people had discussed. Seeing things like rice planted in lines or rice parboilers usually stimulated people to offer more details about their work and their innovations. The visits were organised by various staff members of CNA, who knew the local languages and could translate for the authors.

#### Case studies

The villagers who saw the videos did experiments with rice. The farmers themselves attribute these experiments to watching the videos, and that to (after having watched the videos) having increased their contacts with government extension agencies and NGOs. The following short narratives summarise some of the discussions held in the villages.

#### Videos in the south

Three of the southern villages, Aligoudo, Gléta, and Agonvé, were within 13 km of the city of Lokossa. The other southern villages were within 25 km of the city of Comé (all in the district of Mono).

Kpovidji: starting rice and stopping again.

Local farmer Amoussou Jonas said that in the video he saw how people grow rice, so he decided to do it himself, but he didn't have a milling machine. He had less than half a hectare of rice, so after harvest his wife and daughters milled the rice in a mortar, which was too much work. After

two years he stopped growing rice, but if he had more land, and a milling machine, he would be interested. He now grows tomatoes, manioc, and vegetables. Like various other farmers in this study, Mr Amoussou got the seed from CeCPA (Centre Communal pour la Promotion Agricole), a local government extension office, after having watched the rice videos.

A group of 15 motorcycle taxi drivers in Kpovidji had also watched the videos. Then they got together and started growing rice. They called their group "Gbenondou", which they said means "together we have power". After two years they stopped growing rice for a lack of equipment.

Djanglanmé: videos triggering demand for seed.

Before watching the videos, about 30 people grew rice; CeCPA had convinced them to do so and gave them some training. But the farmers became discouraged after six years, by the difficulty and by the bird problems, and so they abandoned rice growing. Three years later, they saw the videos, and realised that it was possible to grow rice on uplands (i.e., fields without standing water), which encouraged 10 households to plant rice again. They went to CeCPA to get rice seed. Six of the people who started growing rice have since stopped, discouraged by the expense, the lack of machinery, and the birds.

Gléta: just happened to see the videos.

Akoblam Ahonon, from the neighbouring village of Zoungbonou, just happened to see the last two videos. He has a field in Gléta, and he was passing through the village on his way home from work when he saw the movie playing, so he stopped to watch. CeCPA had talked Mr Akoblam into growing rice a few years before he watched the videos, but he became discouraged by some dry years and by some floods. After watching the videos, he felt motivated enough to try his hand at rice again, so he went to CeCPA for more rice seed. The videos convinced Mr Akoblam to fertilise his rice, so he asked CeCPA for advice on that, too. He has been harvesting rice ever since. He takes his rice to Deve (a rice growing area), to have it milled and then sells some to his neighbours, and he brings some rice home to eat.

Ayoucomey: making alcohol, not rice.

Innocent Aloto and his friends had once grown rice, but after a few years they stopped. When they saw the videos they mobilised themselves to start rice again, but within three years they all stopped again. Threshing rice by hand, without equipment, was too difficult. They have other crops such as palm nuts for oil and alcohol, maize, cassava, and tomatoes.

#### Videos in the north

All of the northern villages were within 45 km of the city of Natitingou, in the Department of Atacora.

Bouyagnindi: different responses from men and women.

The women said that they used to thresh rice on the bare earth, but after seeing the video they realised that they should thresh on a tarp, to keep out the stones, and about half of the women now do it that way. Growing rice in small, wetland plots is a woman's task here, but when the men saw the video, they hurried to organise themselves as rice farmers, perhaps thinking that a rice project would soon follow on the heels of the videos.

Tampobré: innovation with parboiling.

The women learnt to soak the rice in warm water before parboiling it, and to properly dry it afterwards. One woman showed us how she puts sticks in the bottom of the pot, and covers them with a sack and puts the rice in, before parboiling. They used to parboil the rice by boiling it in the water, but on the video they learnt that they should steam it and the water should not be in contact with the rice. The women in Tampobré have parboiled rice at least since the oldest living women were children, but because of the video, they now make an effort to keep the rice out of the boiling water, to parboil it in the steam. They also learnt about the need to put down a tarp to avoid getting stones in the rice.

Tampétou: the big change.

Before the videos, folks here gave little importance to rice. They only grew a bit in the wetlands (bas-fond). After watching the videos, the number of rice growers doubled. This was possible because they had plenty of land in the lowlands, and most of it was not being planted.

Some of the women said that after watching the video on parboiling they bought basins and perforated them to make them into parboilers. We also saw this in a previous study in the centre of Benin (Zossou et al. 2010). The women say that now they soak the rice in warm water and the next day they wash it before parboiling it in the steam. Before, the rice used to get over-cooked because it touched the boiling water. The villagers also claimed that they started selecting the good panicles for seed, to thresh the seed independently and store it separately from their paddy.

#### Summary of results

In most of the villages people remembered seeing the videos and could recall many details, even though they had not seen the images for five years (see Table 1). In 11 of the 19 villages people began growing more rice after seeing the videos. In 14 of the villages, people experimented with ideas taken from the videos.

In 14 of the communities, including all nine in the south, people have serious constraints to rice production, including a lack of machinery for land preparation and milling, pests (especially birds), and a lack of wetlands for growing lowland rice. These problems make farmers' interest in rice all the more remarkable, and explain why so many experimented with rice growing for one to two years after having watched the videos, only to later retreat from it. The videos also stimulated some people to renew or establish ties with government agencies to get seed. The videos were convincing and informative enough to stimulate farmers to experiment with rice growing, even if some farmers later abandoned the innovation.

#### Discussion

- (1) Farmers remembered the videos, five years after watching them. Some remembered the videos quite well, even though the videos were not accompanied by a project or even by talks by experts or other information. This suggests that videos are a promising medium for teaching.
- (2) The videos triggered technical change in agriculture. Farmers understood the ideas in the videos and some said that the videos motivated them to start growing rice again. Farmers may have seen the videos as a sign that officialdom was about to start new rice projects. Or the videos may have merely reminded farmers of the benefits of rice (which was enjoying record high prices after 2008). But farmers also experimented with rice parboiling and other techniques, after watching the videos.

Table 1. Summary of impact of rice videos on study communities.

Village	Recalled seeing video	Rice growing	Grew more rice after video?	Technical innovations	Limitations	Institutional innovations
In Mono, in t	the south					
Kpovidji	Yes	Marginal	Yes	Some started growing rice, then stopped	Lack of milling equipment, money	Got seed from CeCPA
Djanglanmé	Remembered it well	Marginal	Yes	10 started growing rice, 4 still grow it	Birds, lack of money for land preparation and machinery	Got seed from CeCPA. Men organised a group
Déguè	Remembered it well	No (fishing village)	No	Almost started growing rice	Lack of land and know how	
Badazouin	Remembered it well	Marginal	Yes	Some people tried growing rice		Got seed from CeCPA. Men organised a group
Médétogbo	Yes	Marginal	No	No change	Birds, insect pests	
Gléta	Yes	Marginal	Yes	1 man started growing rice again. Some started using fertiliser in maize	Lack of money. Bird pests	Got seed from CeCPA
Ayoucomey	Remembered it well	Marginal	Yes	Some started growing rice but stopped	Lack of milling equipment	
Agonvé	Yes	No	No		Not a farm village	
Aligoudo	Yes	Marginal	Yes	A coop started growing rice, then stopped	Drought, lack of milling equipment	Got seed from CeCPA
In Atacora, i	n the north			••		
Bouyagnindi	Remembered it well	Women grew it in lowlands	Yes	Women thresh rice on tarps	Not enough wetlands	Got seed from CeCPA and men briefly organised to grow rice
Tampobré	Remembered it well	Women grew it in lowlands	No	Women used local materials to parboil	Not enough wetlands	
Kouarfa	Yes	Yes	Probably	Women received parboiling equipment, men built dam in wetlands		Women organised in a parboilers' group with support from a project
Tectibayaou	Slightly	Yes	Maybe	Sorting seed		Developed relationship with an NGO project

Tampetou	Remembered it well	Yes	Yes	Many people started growing rice, women improved		Work with CeCPA
Orou Kayo	Yes	Yes	Yes	parboiling Began growing more rice, changes in seed management, threshing etc.		Developed relationship with an NGO project
Kotopounga	Yes	Yes	No	Stopped growing rice	Switched from rice to gold mining	
Chabi Kouma	Many leaders missed video	Yes	Yes	Parboiling, induced by a project	Milling equipment	CeCPA works with them.  Women have a parboiling group with project support
Moupémou	Remembered it well	Yes	No	Pos. seed sorting	Milling equipment	group with project support

Notes on definitions:

<sup>&</sup>quot;Village": all of the communities visited by the research team. Not all of them are highlighted in the previous case studies.

<sup>&</sup>quot;Marginal": few if any people in the village grew rice before watching the video, but they may have tried growing rice in the past.

<sup>&</sup>quot;Induced by project": a project, unrelated to AfricaRice or CNA induced the change, after the video.

(3) The public video screenings sparked institutional change, especially demand for more services. Many farmers in this study went to CeCPA, after having watched the videos, to demand rice seed and information. Extension agents who watch the videos are more at ease discussing the topic and the farmers become more confident seeking advice from extensionists (Okry, Van Mele, and Houinsou 2013). In the future, extension agents could be invited to the video screenings, or village leaders could receive a list of extensionists and their phone numbers.

Since the time when CAN showed the rice videos, the authors have improved their ties with CeCPA, but these videos were originally shown without close coordination with CeCPA. We have now worked with them on translating and distributing videos. In spite of loose coordination in 2008, just watching the videos stimulated some farmers to seek help from CeCPA. Both this and the farmers' agricultural experiments with rice show that the rural people we talked to creatively interpreted the information in the videos. That is, the videos never mentioned CeCPA, and the farmer experiments had a touch of originality; they were not simply copying ideas shown on the video, but working with the principles behind them. Like many agricultural extension agencies in poor countries, CeCPA can offer advice and loan farmers seed, but cannot finance farmers or loan them rice milling equipment or other machinery. However, in this case getting the seed was crucial.

(4) Agricultural learning videos do not necessarily have to be facilitated by a person who is an expert on the subject and can answer questions. Non-agricultural service providers can show agricultural videos, if they have experience with rural communities. CNA, for example, is an expert at attracting a rural audience, setting up the big screen, doing simultaneous translation over the microphone into local languages, showing videos, and facilitating a debate, even though they have little agricultural experience, and could not provide expert facilitation of the rice videos, e.g., could not answer all of farmers' questions. Organisations with an expertise in mobilising entire communities can help to ensure that everyone sees the video, not just the men (Gurumurthy 2006). But these non-agricultural organisations need to be linked to agricultural service providers, because farmers often need more than new knowledge to make a lasting change. For example, in this case, farmers needed seed; links to machinery services for milling and ploughing may also have allowed more families to stay interested in rice.

To do a better job, non-agricultural service providers may need additional materials, such as written material as a memory aid, and contact information of local specialists and service providers. Some training would help service providers anticipate farmers' questions. Video screeners could also use extra copies of DVDs and fact sheets to leave in the communities.

#### Conclusion

By 2009, the rice videos described in this paper had reached over five hundred organisations across Africa (Van Mele, Wanvoeke, and Zossou 2010), and over a thousand by 2010. Many organisations operate within a fairly small geographical area, often with a focus on health and community development and with little knowledge of agriculture. As agriculture is part of rural people's daily life and interwoven with health and nutrition, having good training videos can help these organisations get involved in agricultural development. However, YouTube and other conventional websites have little material of use to tropical smallholders. It will require more effort to make learning videos accessible to farmers and organisations, for example

translating them into African languages and making them accessible on the Internet (such as at www.accessagriculture.org), but the evidence from this study suggests that such efforts are worthwhile, empowering farmers to try new ideas and improving links with extension agencies.

Agricultural learning videos that are made to speak for themselves will find a much broader range of service providers who can bring the videos to farmers, and hence will be more cost effective. If farmers can understand and remember a video just by watching it, without the aid of an expert extensionist, the videos can be distributed on DVDs, on the Internet, or in other low-cost ways.

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#### Notes on contributors

Jeffery Bentley (corresponding author) is an agricultural anthropologist with a lifelong interest in how small-holder farmers creatively apply new ideas to their daily lives.

Paul Van Mele is an agricultural scientist who co-founded the international NGO Access Agriculture. He has created and studied farmer-to-farmer video for over a decade.

Florent Okry is an agricultural scientist and agricultural anthropologist. He is interested in rural learning and innovation systems, as well as in interdisciplinary studies.

Espérance Zossou was a PhD student at the Liege University, Gembloux Agro Bio-Tech, Belgium and at Africa Rice Center (AfricaRice), Benin. Her thesis describes how video and rural radio impact local rice processing and livelihoods and markets.

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