Access Agriculture: A platform to share quality training videos among extension service providers

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ABSTRACT

Since early 2000, information and communication technologies (ICTs) have developed rapidly, creating great expectations. Yet ICTs have been limited by a lack of content to reach farmers with ideas about good agricultural practices and natural resource management. We have seen that audio-visual tools that strengthen farmers' ecological knowledge do stimulate them to experiment. To enhance impact on farmers beyond project mode, videos need to be made available through local service providers and to farmers themselves. These insights triggered the creation of Access Agriculture, an international NGO that promotes quality farmer-to-farmer training videos in developing countries. Access Agriculture uses the latest streaming technology to enable organisations with slow internet connections to view and download videos from its website to train students, extension staff and farmers. Access Agriculture builds on existing networks and local capacities to boost outreach and sustainability. To enhance the impact on farmers, Access Agriculture also ensures that the videos are translated into local languages, mass multiplied and distributed in-country. Yet the best distribution methods are far from obvious. For example, is it better to distribute boxes full of DVDs (digital video discs) to a few key organisations, or to blanket many local partners with one or two DVDs each? In Uganda 10,000 DVDs with training videos were distributed to 18 public and private sector service providers, whereas in Benin 2000 VCDs (video compact discs) where given to 25 local radio stations and in Bangladesh about 1200 DVDs were given to over 300 local people and organisations. There are advantages to each method, and a combination may be the best way to respond to the increased demand for quality training videos. Access Agriculture optimises the distribution of farmer-to-farmer training videos by learning from the past and working with networks from the regional to local level.

Keywords: Communication, Content, Farmer-to-farmer, Innovation brokers, Web-based platform

Introduction

Extension services interact with farmers in different ways depending on the prevailing extension models and objectives, and at times they use additional support tools when training farmers. The more extension is driven by demand, the more extensionists need to widen their own expertise and search for new information. ICT learning tools that are in line with farmers' realities will be more likely to prove useful.

If seeing is believing, audio-visual tools may be better than written materials, workshops or radio for sharing good agricultural practices and natural resource management with farmers. Farmers more

readily accept ideas from another farmer than from an extension agent. Farmer-to-farmer video therefore becomes a powerful tool in the hands of an extension agent. Such videos have proven effective in triggering farmers to innovate (Zossou *et al.*, 2009) and to increase their livelihood assets (Chowdhury *et al.*, 2011; Zossou *et al.*, 2012), but a key question remains: how best to reach out to millions of smallholder farmers with video?

Organisations have used different models to produce and use videos, often blinded by a false assumption that farmers will only learn from videos made locally. This idée fixe is especially prevalent among white-collar officials and media professionals flirting with participatory video models than among local development organisations, farmer organisations and farmers themselves (Van Mele *et al.*, 2010). In fact, farmers like to learn from farmers in other countries. Cross-cultural learning even adds motivation, as long as the videos are relevant and translated into the local language. Farmers in south-western and northern Nigeria reacted to videos on rice seed health (made in Bangladesh), on parboiling (filmed in Benin) and rice cultivation (from Mali). The farmers criticised the videos freely, but had no preference for watching videos featuring West African or Bangladeshi actors. The farmers only cared about the technical content of the film (Bentley & Van Mele, 2011).

Once the content of the video is acceptable, the next question is how to share videos. The internet, television, DVDs, memory sticks and memory cards reach out to different audiences at different scales. Initially web- and DVD-based, Digital Green in India now uses expandable micro SD (Secure Digital) cards to store and exchange videos (Gandhi *et al.*, 2009). They pay village video moderators to show videos with battery operated pico-projectors to small groups of farmers four days a week. The location and people attending varies according to the subject of the video and demand of the people. An alternative model of storing and sharing videos has been developed by Access Agriculture, as described in this paper.

History of Access Agriculture

In 2011, over 500 people involved in extension service provision (mainly in Africa, Central and South Asia and Latin America) responded to an on-line survey organised by the Global Forum for Rural Advisory Services (GFRAS), the Sustainable Agriculture Initiative (SAI) Platform and the Swiss Agency for Development and Cooperation (SDC). Across countries, staff from research institutes, universities, NGOs, extension services, companies, radio stations and farmer-based organisations admitted going to great efforts to find or develop suitable training materials for the farmers with whom they worked. More than 80% expressed an urgent need to establish a specialised web-based service for sharing quality training videos for farmers in developing countries (Van Mele, 2011). To make videos that the global community of extension service providers and farmers can share and use, producing many mediocre local language videos is not cost-effective. Many organisations are willing to translate and use videos made in other countries if they are relevant and well made.

In 2012, Access Agriculture was established as an international NGO with support from the public and private sectors. To reach out to service providers across the world, Access Agriculture established a user-friendly website using the latest video streaming technology allowing people to choose, watch and download quality videos in various languages for free. To reach out to farmers, Access Agriculture also establishes carefully planned distribution strategies of local language DVDs, and relies on the creativity and resources of locally active organisations and private sector agents to

share and show videos to farmers. This open system approach has created a dynamism from which the organisation has learned as it went along.

Below we present examples of how videos hosted on the Access Agriculture website have been used by higher education institutions, followed by three case studies on DVD distribution and video use by extension service providers and farmers.

Use of agricultural training videos in higher education

University lecturers and students across the world access and use videos hosted by Access Agriculture, via DVDs, VCDs, memory sticks and the internet. Lecturers and students who know about the Access Agriculture website share its address with students and others. Lecturers often download and play videos for their students, and then discuss the content to deepen their understanding and to suggest innovations.

By linking with regional university and extension networks, lecturers and students increasingly use the quality videos hosted by Access Agriculture. For instance, Professor Patrick Van Damme at the University of Ghent in Belgium uses the "Fighting Striga" DVDs in lectures on "tropical crop production". Dr Osséni Gominan of the FAO, a lecturer of the University of Abomey-Calavi in Benin also did the same with students of the department of natural resource management of the Faculty of Agronomic Sciences. Dr Ismaïl Moumouni of the University of Parakou, northern Benin, downloaded 21 videos from the Access Agriculture website to use in his extension and communication lectures. Three of his MSc students will evaluate the distribution and use of videos in agricultural extension in Benin. Similar examples are emerging in other countries.

To stimulate the integration of agricultural training videos in higher education, Access Agriculture partners with seven institutes in Africa, and plans to expand to South Asia soon. Partners include the University of Abomey-Calavi and University of Parakou in Benin; the University of Cairo in Egypt; Egerton University in Kenya; the Natural Resources College and Lilongwe University in Malawi; and Makerere University in Uganda. These universities supervise MSc and PhD research on the dissemination, use and impact of farmer-to-farmer training videos. Insights from these studies will be woven into the extension and communication curricula of their universities to help mainstream video-mediated rural learning.

DVD distribution to reach farmers: Case studies from Africa and South Asia

Although videos hosted on the Access Agriculture website are used in higher education, the main targets are farmers. We present three experiences with video distribution: one from East Africa, one from West Africa and another from South Asia. The case studies share some similarities: the video discs contained multiple farmer-to-farmer training videos that were developed according to the zooming-in, zooming-out approach (Van Mele, 2006). Rigorous research had gone into assessing farmers' learning needs and script development. The videos were of high quality, locally appropriate and regionally relevant. All videos were made available to farmers in their own language. The organisations involved in distributing the videos at the national level used public funds from development projects, whereas those further distributing and using the video discs at grassroots

level did this on their own initiative, without being paid to do so. Each mobilised its own resources and social networks, resulting in different approaches (Table 1).

Table 1. Video distribution mechanisms tested in East Africa, West Africa and South Asia.

Country	Number of video discs distributed	Organisation distributing videos at national level	Organisations distributing and using videos at local level	Key lessons learned
Uganda	7500 DVDs	Farmers Media, a communication company	18 public and private sector service providers	Depositing boxes with hundreds of DVDs to an organisation may be ineffective without proper planning and monitoring Private sector value chain actors who see a direct benefit in strengthening farmers' skills play an important role in distribution and use of videos
Benin	2500 VCDs	AfricaRice, an international research organisation	25 local radio stations	Radio stations use video to strengthen the agricultural knowledge of their staff and use the videos creatively to build links with their communities Commercial radio stations sell videos to farmers and extension agents, whereas community radio stations distribute them for free, but could also sell video as a future source of income generation
Bangladesh	1250 DVDs	The Agricultural Advisory Society, a national NGO in collaboration with CIMMYT	Over 300 tea stalls, NGOs, extensionists, community-based organisations, local government, local village shops and many others	Giving a few copies to many service providers creates a lot of local initiative to view and further share videos

Uganda. Eleven farmer-to-farmer learning videos made in Bangladesh and West Africa about growing rice, from seed to post-harvest, were dubbed into five major languages of Uganda (plus English, Swahili and French). In 2011 these "Rice Advice" videos were copied onto a DVD and some 7,500 copies were distributed to 18 public and private sector service providers in Uganda. Most of them received between 100 and 1000 DVDs.

As organisations are rewarded for conducting projects, not for distributing information, some failed to properly distribute the videos. The more copies of the DVD there are, the easier it is to cover more distribution pathways and to ensure that every extensionist and every farmers' cooperative, association and organised group has access to agricultural training videos. But simply leaving boxes of the DVDs with organisations does not get videos to the grass-roots level unless accompanied with

a proper distribution and monitoring plan; otherwise it may be better to distribute the DVDs one by one. Another key lesson is the need to involve value chain actors in the distribution of training videos. For example, the rice millers quickly realised that the videos helped raise farmers' rice production and improve rice quality, so they made efforts to get videos into farmers' hands. Some of the input dealers grasped the importance of giving DVDs to individual farmers who came in to buy rice seed or to ask for advice on growing rice (Bentley *et al.*, 2013a).

In terms of video viewing and impact, at first we thought that the videos were effective only if combined with a more holistic extension program -- e.g., if an extensionist went to a village and "facilitated" the videos by showing them and fielding farmers' questions, discussing the video content, and following up with later demonstrations and encouragement. But that is not always so. Farmers learned to use the innovations and improved their rice yields just by sitting down and watching the videos (Bentley *et al.*, 2013a).

Benin. Although the situation has changed over the past five years in West Africa, in 2009 VCDs were still far more widespread than DVDs. The growing popularity of Bollywood and Nollywood entertainment movies has triggered villagers to buy DVD players. In 2009, and as a way to experiment with distribution channels, the Africa Rice Center (AfricaRice) distributed about two thousand VCDs to 25 local radio stations across the country. Each VCD contained 11 rice videos in a local language spoken in that particular region.

Radio stations distributed VCDs in different ways. Using persuasive adverts, the commercial radio station of Glazoué sold most of the 240 VCDs to farmers and extension agents, whereas the community radio stations distributed most VCDs free of charge. About 20% of all the VCDs were sold, suggesting that farmers are willing to pay to acquire knowledge (Okry *et al.*, 2013).

None of the 11 radio stations surveyed had organised village video shows, because they lacked equipment and travel money. Nevertheless, one third of the radios invited farmers to their stations to watch the videos. 78% of the radio stations organised video sessions for their staff. During these sessions, which often coincided with the weekly planning meetings, radio staff selected several topics from the videos that reflected the interests and priorities of the rice producers of their area. They extracted parts from the videos as audio files, and aired them as such or used them to organise interactive thematic discussions, roundtables or quizzes (Okry *et al.*, 2013).

The technical information contained in the farmer-to-farmer training videos also helped to build extension agents' confidence to interact with farmers. And in their turn, the farmers who watched the videos gained confidence to demand additional advice from extension agents. The rice training videos fostered new institutional relationships among radio stations, extension services and farmers, and reinforced existing ones. The training videos contributed to a better positioning of radio stations as partners in agricultural knowledge dissemination.

Bangladesh. In 2012, CIMMYT hired the NGO AAS (Agricultural Advisory Society) to show a video on strip tillage and bed planting for wheat and maize to farmers in southern Bangladesh. AAS showed the video on appropriate tillage machinery in 332 villages, to 80,000 farmers in late 2012, and distributed a DVD with the tillage video, but also with four other videos on rice seed health, which had been made in 2003 in Bangladesh with IRRI. AAS left about 1250 DVDs with over 300 tea stalls, NGOs, community-based organisations (CBOs), custom tillage operators, input dealers and many others (Bentley *et al.*, 2013b).

Few of these community members were extensionists, but most of them showed the videos, albeit each group in its own way. The tea stalls showed the videos many times, but reached far more men than women. Some of the NGOs and CBOs did a better job of sharing the videos with women. Actors who did not have DVD players (e.g. some of the shopkeepers and custom tillage providers) gave their copy of the DVD to someone else who did have a DVD player, who screened the video for neighbours. Private service providers attached to local government always showed the videos, sometimes to large audiences. In the past few years, Bangladesh has developed small cable TV companies called "dish-lines" that download commercial TV stations with satellite dishes and feed the cables to a few hundred homes and businesses in several villages. They all played the agricultural videos that were given to them either by AAS or one of the CBOs.

We were surprised that some of the people who got a DVD watched the video a dozen times or more. That seemed like too much, but they explained that they did so because they wanted to really understand the material. Farmers used the video creatively, watching it many times, to teach themselves as much as possible about the innovations.

While the video sang the praises of the machinery, farmers did not simply swallow the idea. They clearly understood the benefit of the new machines, but they were wise enough to know that there are inevitably problems in any novelty. So after seeing the video, some of the farmers visited demonstration plots, often with no facilitation at all, and walked through the rows of machine-planted maize or wheat, seeing for themselves potential drawbacks to the innovation.

Conclusion

Apart from an open access, web-based video platform to reach out to universities and extension service providers, Access Agriculture facilitates local language translations and puts as many good learning videos as will fit onto thematic DVDs. A really good video will be watched by many farmers, but only if someone in the community gets a copy of the DVD. We know now that dropping off boxes with hundreds of DVDs with an extension agency may be a poor way to get DVDs into the hands of extensionists. In the future we will need better planning to see that agencies distribute DVDs properly. Ironically, some actors who are not very good at showing videos may be just the ones to distribute them. For example, local radio stations seem well placed to get videos out to farmers and extension agents. Local government would be more effective than a project at insisting that the local cable company shows a video on the dish-line. Some NGOs visit many community-based organisations, and could easily give each one a DVD. And videos are cheaper by the dozen; a DVD with 10 videos is as easy to distribute as a DVD with only one video. Upon demand, Access Agriculture establishes DVD distribution and monitoring strategies for its clients. By reaching out to many service providers with quality videos, many farmers will be able to watch them, and then apply the ideas creatively.

References

Bentley, J. and Van Mele, P. (2011) Sharing ideas between cultures with videos. *International Journal of Agricultural Sustainability* 9(1), 258–263.

Bentley, J., Van Mele, P. and Musimami, G. (2013a) *The Mud on Their Legs – Farmer to Farmer Videos in Uganda.* Agro-Insight and MEAS, Michigan State University.

Bentley, J., Van Mele, P. and Harun-Ar-Rashid (2013b) *A video about mechanical seeders in Bangladesh – If we are convinced, we will buy it.* Agro-Insight and MEAS, Illinois University.

Chowdhury, A.H., Van Mele, P. and Hauser, M. (2011) Contribution of farmer-to-farmer video to capital assets building: Evidence from Bangladesh. *Journal of Sustainable Agriculture* 35(4), 408–435.

Gandhi, R., Veeraraghavan, R., Toyama, K. and Ramprasad, V. (2009) Digital Green: Participatory video and mediated instruction for agricultural extension. *Information Technologies and International Development* 5(1), 1-15.

Okry, F., Van Mele, P. and Houinsou, F. (2013) Forging new partnerships: Lessons from the dissemination of agricultural training videos in Benin. *The Journal of Agricultural Education and Extension*, 1-21.

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), 131-142.

Van Mele, P. (2011) *Video-mediated farmer-to-farmer learning for sustainable agriculture. A scoping study for SDC, SAI Platform and GFRAS.* Ghent, Belgium: Agro-Insight.

Van Mele, P., Wanvoeke, J., Akakpo, C., Dacko, R.M., Ceesay, M., Béavogui, L., Soumah, M. and Anyang, R. (2010) Videos bridging Asia and Africa: Overcoming cultural and institutional barriers in technology-mediated rural learning. *The Journal of Agricultural Education and Extension* 16(1), 75-87.

Zossou, E., Van Mele, P., Vodouhe, S.D. and Wanvoeke, J. (2009) The power of video to trigger innovation: rice processing in central Benin. *International Journal of Agricultural Sustainability* 7(2), 119-129.

Zossou, E., Van Mele, P., Wanvoeke, J. and Lebailly, P. (2012) Participatory impact assessment of rice parboiling videos with women in Benin. *Experimental Agriculture* 48(3), 438-447.