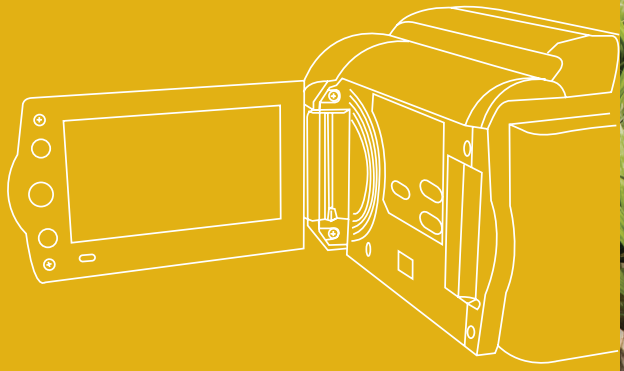


HOW IS LOW-COST VIDEO CURRENTLY BEING USED IN AGRICULTURAL DEVELOPMENT?

This Component provides an overview of some of the ways that video is currently being used in agricultural development, particularly for extension services. It includes illustrative examples from organizations both in Africa and elsewhere, along with contact information, websites and other resources that you can use to learn more about a given approach.

COMPONENT GOALS

BY THE TIME YOU HAVE FINISHED THIS COMPONENT YOU WILL:

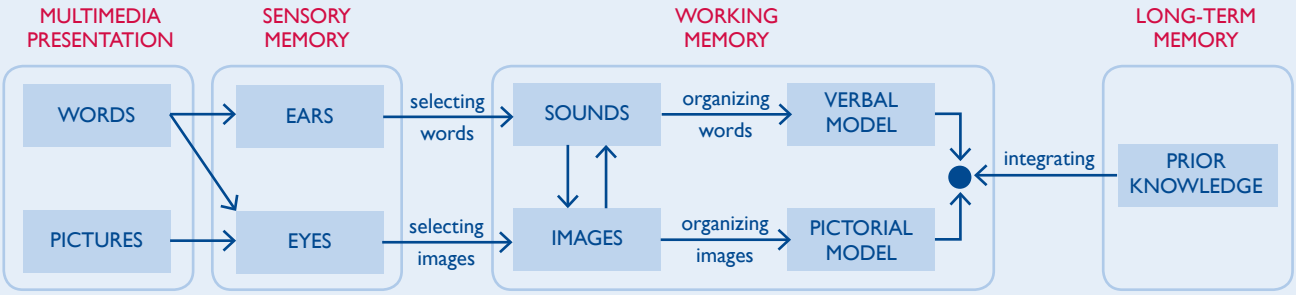
✓ *Understand how video is currently being used in agricultural development, particularly for extension services.*

For more examples of ICT4D project failures or to find a FAILFaire near you, check out: http://failfaire.org/

IT IS NOT UNCOMMON for development practitioners to find themselves enamored by the latest technology. Most of us know of at least a project or two that discovered that, for one reason or another, the technology that they thought would be a game changer ended up as an absolute failure. FAILFaires, which provide an opportunity for international development practitioners to share information about unsuccessful mobile and ICT interventions, have sprung up as an opportunity to learn from what went wrong. Video is no stranger to such failure. A common anecdote goes something like this: "We gave our beneficiaries video cameras, but they never used them. I'm not exactly sure why." The truth is that effectively using video for development is never as easy as simply handing out cameras.

Rather than focusing on all of the ways that video has failed to live up to expectations, this Component will provide a snapshot of some of the organizations that have demonstrated success using video without having to invest massive amounts of resources. Although not a panacea, when done right, video has proven to be a powerful way to share a wide variety

Figure 1: Depiction of cognitive theory of multimedia learning[1]



[1] Mayer, R. E. & Moreno, R. (2000). A Learner-Centered Approach to Multimedia Explanations: Deriving Instructional Design Principles from Cognitive Theory. [http://imej.wfu.edu/articles/2000/2/05/index.asp. Accessed on February 17, 2012].

of agricultural information with farmers. The impact of multimedia, such as video, on learning has even been supported by research. Richard Mayer, a cognitive psychologist at the University of California, Santa Barbara has done extensive research on the benefits of multimedia learning — specifically of audio and visual inputs — on recall (See figure 1 on preceding page).

Since the sector is rapidly evolving, this is not meant to be a comprehensive list, nor is it meant to suggest one approach over another. It is important to remember that each situation is unique, so what has worked in one project may not always transfer to a different context or environment. Although not all of the examples provided here are using low-cost video or working directly with farmers, they should at least provide you with a general understanding of some of the possibilities that currently exist for using video to enhance agricultural development activities and extension services. They should also prove helpful as you work on developing your own implementation plan throughout the course of this toolkit.

Videos produced by each of the organizations highlighted below are included on the accompanying DVD.

DIGITAL GREEN

digitalGREEN

WHO ARE THEY?

Digital Green is an international NGO registered in the U.S. and India that uses a mediated model to disseminate targeted agricultural information via digital media to small-scale and marginal farmers in India. To date, their partners in India have produced more than 2,000 videos and worked with almost 90,000 farmers. They are also working in partnership with iDE Ethiopia to bring their system to farmers in Ethiopia as well. They work in partnership with existing extension systems, NGOs, and the private sector, which helps them to establish scale, generate trust, and leverage domain expertise. Their system is based on a hub (district-level) and spoke (village-

level) model, with multiple spokes benefiting from each nearby hub. All videos are locally produced using low-cost equipment and primarily follow a facilitated training format with farmers and experts directly explaining the topic to the viewer.

The Digital Green system consists of four primary elements:

1. Using a participatory process for local video production;
2. Employing a human-mediated instruction model for video dissemination and training;
3. Deploying a hardware and software technology platform to exchange data in areas with limited internet and electrical grid connectivity; and
4. Utilizing an iterative model to progressively address the needs and interests of the community using both web-based analytical tools and interactive voice response (IVR) phone-based feedback channels.

WHAT TECHNOLOGIES ARE THEY CURRENTLY USING?

Digital Green uses pocket video camcorders to record videos with wireless microphones and tripods to maintain audio and video quality. They primarily use Windows Movie Maker for editing, with some more advanced sites using Sony Vegas. Finished videos are disseminated to community members via small, hand-held projectors called pico projectors. In the past, they also made use of DVD players and televisions to play their videos. They also employ a phone-based IVR system and online/offline web-based data management and analytical tools to collect farmer feedback and to measure impact.

HOW DO THEY PRODUCE THEIR VIDEOS?

Videos are produced at the local level by a trained team of 4-6 video producers in each hub. The community video producers work in pairs to create 6-8 videos per month with farmers throughout different villages in

their district. The videos are approximately 8-10 minutes long and feature a variety of topics including testimonials and demonstrations of improved production techniques, market linkages, and government schemes. Given the variability of local agricultural and environmental resources, videos tend to focus on techniques that are either improvements or possible alternatives to current practices. All video topics are selected to correspond with topics that are already being promoted by its partners through existing extension systems. Digital Green's partners also employ domain experts to review each video to ensure the accuracy, clarity, and quality of all content.

WHAT ARE THEIR AVERAGE COSTS AND HOW ARE THEY FUNDED?

Digital Green views its work primarily as a public good, and therefore relies on grant funding for most of its technology development and training-of-trainer activities. They also work with their partners to institutionalize business models to support recurring costs. In India, Digital Green estimates that Rs. 2 (roughly US$0.04) per farmer per week covers the recurring costs of the system, primarily facilitator compensation. They further estimate that Rs. 4 per farmer per week would also cover the capital costs of the system in addition to facilitator costs. These fees are based on a minimum of 90 participating farmers per village in a year. Payments vary across partners, but this model seems to be gaining traction in India.

HOW DO THEY DISSEMINATE THEIR VIDEOS?

All of the video content created by each Digital Green hub is uploaded to a YouTube channel and also is available via an advanced search mechanism on the organization's website. District-level hubs, which tend to be partner offices, serve as distribution centers for the 100-500 local villages (or spokes) in their district. Within each village, a facilitator with a pico

Check out Digital Green's virtual guides on video production and video dissemination on YouTube.

http://www.youtube.com/watch?v=C8IJrvlTEqs

http://www.youtube.com/watch?v=tag3hL74AJg

projector serves between 6-8 groups of 10-20 farmers. Groups served tend to be existing women's self-help groups or farmer clubs. Screenings are held with each group on a regular schedule in the evenings each week.

To increase the likely adoption of new farming techniques or approaches, all screenings are facilitated and include a discussion with farmers about the content of each video afterwards. Digital Green has also found that introducing video to a community in a particular sequence can pique interest and increase adoption. They use the following sequencing system when starting in a new village:

1. Entertaining clips, such as a women's group singing folk songs, to attract an audience;
2. Testimonials and interviews with progressive farmers who share the concepts and experiences associated with the practices;
3. Brief highlights of a broad spectrum of the practices that they plan to promote;
4. Comparative demonstrations with progressive farmers that visibly — often humorously — show the benefits of the practices;

5. Familiar farmers from the local vicinity (preferably, the same village) attempting the practices; and
6. Experts detailing concepts and step-by-step instructions for using each of the practices.

HOW ARE THEY MEASURING IMPACT?

Digital Green uses a robust COCO (Connection Online | Connect Offline) database to track a variety of data using user-defined dashboards. This system allows anyone, from anywhere in the world, to get real-time information about things such as number of screenings held each day, average number of attendees, average time to produce a video, and farmer adoption/experimentation rates.

Preliminary research conducted by PRADAN and VARRAT, two of Digital Green's partners in Orissa, India, found that integrating the Digital Green model into existing extension services lowered the cost of adoption from $10-18 per instance to $3-4. In addition, a preliminary and limited sample analysis found that within eight months of deploying the Digital Green system, the average cumulative increase of income rose by $242 per farmer in a cluster of villages in Orissa. They are now in the process of planning a more rigorous evaluation of the impact of their system using a large-scale, multi-intervention, randomized controlled trial.

WHERE CAN I GO TO LEARN MORE ABOUT DIGITAL GREEN?

Digital Green shares a wealth of information on their website at http://www.digitalgreen.org. They also have fully downloadable versions of their Quality Assurance Framework and Standard Operating Procedures, which provide a detailed explanation of their model from start to finish. Although based in India, Digital Green also offers in-depth trainings on how to implement their approach internationally. For more information, contact contact@digitalgreen.org.

WORLD COCOA FOUNDATION VIDEO VIEWING CLUBS (VVCS)

WHO ARE THEY?

The World Cocoa Foundation originally established the Video Viewing Clubs in Ghana under the Sustainable Tree Crops Program (STCP), which ran from 2006-2011. Over the course of the program, 95 VVCs were established, reaching more than 2,500 cocoa farmers. The videos are a mix of narrative, facilitated farmer interviews, and narrator-led instructional content.

WHAT TECHNOLOGIES ARE THEY CURRENTLY USING?

Videos were recorded using professional camcorders with external microphones and full-size tripods. Dissemination was done using televisions, DVD players, and a generator to power the equipment.

HOW DO THEY PRODUCE THEIR VIDEOS?

The program employed a master trainer who worked with a team of eight trainer farmers to develop the scripts, act, film, and narrate video clips. A total of 11 videos were developed sequentially based on a technical manual used at farmer field schools. Scripts were developed post-shoot so that they could be translated into other languages and subtitled as necessary.

WHAT ARE THEIR AVERAGE COSTS AND HOW ARE THEY FUNDED?

The World Cocoa Foundation estimates that it cost about $78 per farmer to train using the VVCs. This includes the cost of training a facilitator, viewing equipment (e.g., televisions, video players, generators), and other

miscellaneous club implementation costs. It does not include the cost of producing each video, which is estimated at roughly $12,000 per episode. Through the end of 2011, the program was funded by international government and private-sector sources.

HOW DO THEY DISSEMINATE THEIR VIDEOS?

Viewing clubs meet on a weekly basis for roughly three to four months and consist of approximately 20-25 members. Each session is mediated by a facilitator who engages farmers in discussion on the content of the videos.

HOW ARE THEY MEASURING IMPACT?

The program administered a formal survey to 32 randomly selected female program participants and 30 control female farmers at the end of its pilot phase in 2008 to assess changes in adoption, knowledge diffusion, and perception of the VVCs. Although the survey did not find any significant differences in the adoption rates or yields between the control and treatment groups, it did find a significant increase in knowledge of improved practices.

WHERE CAN I GO TO LEARN MORE ABOUT VVCS?

The World Cocoa Foundation can be found online at http://www.worldcocoafoundation.org, although at the time of print they had relatively little information available on the VVCs. For more information, contact Ethan Budiansky, Cocoa Livelihoods Program Manager, at Ethan.Budiansky@worldcocoa.org.

AGRO-INSIGHT

WHO ARE THEY?

Agro-Insight is an enterprise based in Belgium that creates highly polished videos using a team of professional or locally trained videographers. Videos are well-researched and scripted in advance, and primarily in a narrator-led instructional format with some farmer interviews.

Their model is based on the zooming-in, zooming-out (ZIZO) method, which considers both local and regional relevance when developing videos to maximize the number of farmers likely to be impacted by each video. The ZIZO approach revolves around five key principles:

1. Identify a generic topic of regional relevance;
2. Learn about context diversity through participatory research;
3. Develop videos with farmers and local field workers;
4. Test videos in various contexts and fine tune them; and
5. Scale-up and scale-out.

WHAT TECHNOLOGIES ARE THEY CURRENTLY USING?

Agro-Insight uses professional camcorders and full-sized tripods to record video, and clip microphones to ensure high audio quality. All of their videos are edited using Adobe Premiere Pro, which is a high-end video production program. The most recent version at the time of writing is CS5.5, which costs $799 retail and requires at least 2GB of RAM and an Intel® Core™2 Duo or AMD Phenom® II processor.

VIDEO-MEDIATED FARMER-TO-FARMER LEARNING FOR SUSTAINABLE AGRICULTURE

Agro-Insight conducted a scoping study for SDC, GFRAS, and SAI Platform on the production, dissemination, and use of farmer training videos in developing countries in mid-2011. The study included research, expert interviews, and an online survey with 500 respondents from research institutes, universities, and NGOs. The final report entitled, *'Video-mediated farmer-to-farmer learning for sustainable agriculture'* is an interesting read for a broad perspective of how video is being used for agricultural extension, various production and dissemination methods, some impact to date, and challenges and opportunities for the future. Although the report was written through the lens of Agro-Insight's own approach to video, the report is still a worthwhile read for projects that plan to venture into video development. A full version of the report can be accessed online at: http://agroinsight.com/downloads/articles-divers/Farmer-to-farmer-video-FINALREPORT-Van-Mele-2011.pdf

HOW DO THEY PRODUCE THEIR VIDEOS?

Videos are created with the input of local farmers, who assist with identifying topics, providing input for script development, and demonstrating practices. The actual recording, editing, and publishing of videos is done by Agro-Insight staff or by locally trained counterparts. All of their videos are scripted and translated into English, French and multiple local languages (depending on demand).

WHAT ARE THEIR AVERAGE COSTS AND HOW ARE THEY FUNDED?

The price of a video produced by Agro-Insight varies depending on the complexity of the topic, scale, location, logistics, and length of the video. Its corporate clients include international research and development agencies, donors, and universities.

HOW DO THEY DISSEMINATE THEIR VIDEOS?

Dissemination methods vary based on the local partner, although the primary means of distribution are through the internet, video compact disc (VCD), and DVD. Agro-Insight's videos are also distributed through the Access Agriculture website at http://www.accessagriculture.org.

Large-scale dissemination (e.g., 20,000 multi-language DVDs) is done at regional and national scales through a targeted media campaign and a concerted action of mapping stakeholders. Agro-Insight videos are also broadcast on national television and promoted and used by rural radio stations.

Facilitation is not built into their distribution system, although facilitated viewing groups have been set up by farmers, NGO staff, or extension workers on an ad hoc basis.

HOW ARE THEY MEASURING IMPACT?

Agro-Insight has its own team of experts to conduct impact assessments for its clients, which include econometric approaches, technography, sustainable livelihood analysis and participatory evaluation. Given the diversity of research objectives and approaches used for each assessment, it is not possible to provide an overview of all of their research here. All of the Agro-Insight's impact studies, however, have been published in scientific journals and can be downloaded from their website.

WHERE CAN I GO TO LEARN MORE ABOUT AGRO-INSIGHT?

More information on Agro-Insight can be found on their website at http://www.agroinsight.com/. About two dozen of the extension videos they have produced can be viewed directly through their website, as well as numerous publications related to their work on farmer-to-farmer video. For more information, contact info@agroinsight.com.

INSIGHTSHARE

WHO ARE THEY?

InsightShare is an organization based in the UK that focuses on participatory video (PV), which is a set of techniques used to involve groups or communities to shape and create their own videos. They work with development agencies, NGOs, and research institutions to help create their own PV activities and have helped to establish community-owned People's Video Hubs in nine countries across the world, including Cameroon, Kenya, and South Africa. Although their videos are not focused exclusively on agricultural topics, they have worked with farmers in several countries.

Their approach uses experiential learning, including games and exercises, to help participants rapidly learn how to create their own videos. InsightShare's PV methods value local knowledge, seek to build bridges between communities and decision makers, and empower people to exercise greater control over decisions affecting their lives.

They have also developed a practical guide to using PV entitled, Insights into Participatory Video: A Handbook for the Field, which is available to download for free in English, French, Spanish, and Russian on their website at: http://insightshare.org/resources/pv-handbook. This handbook is a must-read for anyone interested in using participatory video in their projects.

WHAT TECHNOLOGIES ARE THEY CURRENTLY USING?

InsightShare's participatory video projects typically employ "pro-sumer" camcorders and other basic video production equipment (e.g., tripods, microphones, headphones, etc.). The cameras used are of high quality, but the primary considerations are ease of use and ability to attach an external microphone and headphones. A current favorite camera for InsightShare is

the Canon HV40, a reliable and high-performing camera that is at the top end of the price scale at $1,200. Less-expensive cameras sometimes used are typically priced around $700-$900.

Videos produced by participants through InsightShare's projects tend to be edited on Apple laptops (MacBook Pro or MacBook) using either Final Cut Pro (professional editing software) or iMovie (Apple's equivalent to Windows Movie Maker), depending on who is editing and how much training time is available. The 'hubs' that have been developed by InsightShare over the last three-to-four years all use MacBook Pro laptops with Final Cut Pro software.

HOW DO THEY PRODUCE THEIR VIDEOS?

Participatory video places representatives of the 'community' (e.g., a village, town, interest group, profession, etc.) in control of all aspects of video production as a tool for exploring, investigating, understanding and communicating an issue or subject. InsightShare's process seeks to create safe and supportive spaces within which the power of video can be harnessed to unlock knowledge, understanding, abilities, passions and perspectives that can be shared with one another and, in turn (and if appropriate), with the wider community and beyond.

Participants undertake every role in the production process, from devising storyboards, to operating the camera, to presenting or interviewing, and typically all of the post-productions processes as well, although editing may be undertaken by the facilitator(s) in collaboration with the participants. Whether the mouse (controlling the editing software) is in the hands of the participants or the facilitators, it is the group as a whole that decides what to include or exclude, in which sequence to place images and sound, and ultimately what story or narrative is being told. A rigorous participatory 'paper editing' process is always undertaken with the entire group to enable a consensus around these crucial decisions prior to any actual cuts being made.

WHAT ARE THEIR AVERAGE COSTS AND HOW ARE THEY FUNDED?

InsightShare undertakes projects for a wide range of NGOs and agencies as a consultant, providing participatory video facilitation skills and capacity building trainings across a bewildering array of countries, communities, and themes. InsightShare also delivers its own participatory video projects through grants from a range of trusts and foundations, typically in partnership with local or national NGOs or CBOs with whom they have an established and trusted relationship. Costs vary depending on the scale and the duration of the projects being delivered, from short-term projects delivered over two to four weeks, to long-term capacity-building programs and 'hub' development projects that span two to three years.

HOW DO THEY DISSEMINATE THEIR VIDEOS?

Local screenings are central to most participatory video projects and are typically organized to ensure the maximum opportunity for the wider community to attend. The screenings often take place in a central community location and are timed so that they do not to interfere with other key activities in the working day or broader calendar (e.g., harvesting periods). Video projectors and public address systems are regularly used to create a cinema screen on a sheet or wall, although televisions with additional speakers are also used when necessary.

Depending on the needs of the audience and the participants (as authors and owners of any materials produced), the videos from these projects are copied to DVD, VHS, CD-ROM and/or uploaded to the internet for broader dissemination. In general, the dissemination strategy follows the aims and objectives of the participants creating the content, and the needs and preferences of the audience being targeted.

HOW ARE THEY MEASURING IMPACT?

InsightShare's participatory video projects often incorporate a range of monitoring and evaluation techniques from the outset. The principle domains often center on impacts to the immediate community and the participants themselves in recognition of the personal, inter-personal and local orientation of participatory video as a tool for change. Facilitators deploy many different participatory monitoring approaches throughout the process, and invite participants to take an active role in interrogating and evaluating the process, its delivery, and outcomes. Partners and clients are also engaged with evaluations of projects and the long-term monitoring of impacts and outcomes for the individuals and communities involved, as well as on any issues approached.

WHERE CAN I GO TO LEARN MORE ABOUT INSIGHTSHARE?

InsightShare's website (http://www.insightshare.org) includes an overview of their approach to PV, details on the services they provide, case studies, resources, and participatory videos on a range of topics created by partner projects over the years. For more information, contact info@insightshare.org.

The following example does not work specifically with farmers or agricultural extension services, although it may also be of interest to you as you begin planning your own activity.

ONE MEDIA PLAYER PER TEACHER (OMPT)

WHO ARE THEY?

OMPT is an initiative by a U.S.-based nonprofit organization called Polder, Inc. Polder offers development organizations low-cost, portable, and self-powered audio visual equipment, along with learning resources and trainings on using low-cost video. They also conduct field trials on equipment in challenging conditions typical in the developing world. Their team can make recommendations on the most appropriate technology solution to meet the needs and environment that you are working in.

WHERE CAN I GO TO LEARN MORE ABOUT OMPT?

OMPT can be accessed online at http://www.ompt.org/. Their website includes information on their recommended technology solutions, and techniques and best practices for producing and disseminating video. For more information, contact Matt York at myork@ompt.org.

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