



LEARNING THROUGH THE EYES OF OTHERS

Access Agriculture's experiences with farmer-training videos in agricultural extension and education



About Access Agriculture

Access Agriculture is an international NGO that works across all developing countries to enable the south-south exchange of and access to quality audio-visual training materials to secure sustainable livelihoods of rural people. Access Agriculture facilitates and builds capacity for the production and translation of quality farmer-to-farmer training videos into local languages. It provides quality training material for rural advisory services and agricultural education systems, and improves access of youth, women, smallholder and marginalised farmers to relevant knowledge.

For more information on Access Agriculture, visit www.accessagriculture.org

About CTA

The Technical Centre for Agricultural and Rural Cooperation (CTA) is a joint international institution of the African, Caribbean and Pacific (ACP) Group of States and the European Union (EU). CTA operates under the framework of the Cotonou Agreement and is funded by the EU.

For more information on CTA, visit www.cta.int

About ICRA

iCRA is dedicated to improving the livelihoods of smallholder farmers by building trust in value chains. iCRA strengthens agri-food professionals through individual courses, agribusiness coaching and organisational capacity building, so they're in a better position to connect, collaborate and negotiate for a stronger, profitable and sustainable value chain. By establishing trust and sustainable relationships in and around value chains, we improve business and livelihoods of smallholder farmers. We believe in creating partnerships and common goals. We build trust in value chains.

For more information on iCRA, visit www.icra.global

Disclaimer

This work has been made with the financial assistance of the European Union. However, it remains under the sole responsibility of its author(s) and never reflects CTA's or its co-publisher's or European Union's opinions or statements whatsoever nor as well the opinion of any country or State member. The user should make his/her own evaluation as to the appropriateness of any statements, argumentations, experimental technique or method as described in the work.

Copyright notice

This work is the intellectual property of CTA and its co-publishers Access Agriculture and ICRA.

Its dissemination is encouraged for private study, research, teaching, under the terms of the Creative Commons Attribution License (<https://creativecommons.org/licenses/by/4.0/legalcode>), provided that appropriate acknowledgement is made:

- of CTA's copyright, in accordance with the license Creative Commons 4.0, and of EU financing, by including the name of the author, the title of the article and the following notice "© Access Agriculture, CTA, ICRA 2018 EU financing",

- and that CTA's or its co-publishers or EU's endorsement of authors' views, products or services is not implied in any way, by including the standard CTA disclaimer.

ISBN: 978-92-9081-630-0

© Photos: Ronald Kondwani Udedi (p. 27), Kevin Mutongo (front cover: top left and bottom right) and Paul Van Mele (all other photos)

LEARNING THROUGH THE EYES OF OTHERS

**Access Agriculture's experiences with farmer-training
videos in agricultural extension and education**

By Mundie Salm, Jeffery Bentley and Florent Okry



CONTENTS

FOREWORD	06
ACKNOWLEDGEMENTS	08
ACRONYMS	09
1. VIDEO FOR AGRICULTURAL TRAINING: APPROACHES AND ISSUES	10
Introduction	10
The path of a video from conception to impact	11
Identifying and framing the topic	11
Producing a video	12
Making a video accessible	15
Studying learning from video and other impacts	16
2. EXPERIENCES IN VIDEO PRODUCTION	17
Getting started: identifying the subject area of the video	18
Framing the script	19
Framing a video for learning	19
Writing the script and making it relevant for different contexts	21
Capturing and editing	22
Clear communication and video production going hand in hand	23
3. EXPERIENCES IN MAKING VIDEOS ACCESSIBLE	25
Translating videos to into local languages: an exacting task	25
Getting videos to (small) farmers in remote areas	27
Using video in radio or television broadcasts	27
Organising community screenings	28
From watching DVDs to distributing digital files to farmers	29
Finding technologies to overcome lack of electricity	30
Selling Access Agriculture videos through commercial channels	30
Measuring video distribution to farmers	30

4. EXPERIENCES IN LEARNING (AND MORE) FROM TRAINING VIDEOS 32

Farmer learning from training videos	32
Listening and learning from the radio	32
Watching videos several times to better understand and retain content	33
Timing it right and combining video with other activities to enhance learning	33
Reflecting on whether videos can “stand alone” in farmer learning	34
Using video for agricultural extension	35
Supporting the process of facilitation with video	36
Mainstreaming use of video into extension systems	36
Stimulating change through training videos	37
Learning and technical change	37
Learning and social change	37
Using agricultural training videos in the classroom	38
Learning by filming	39

5. KEY LESSONS AND THE FUTURE OF FARMER-TRAINING VIDEOS 40

Key lessons learned	40
Producing farmer-to-farmer training videos	40
Making video accessible to farmers	40
Learning from video	41
The future of farmer-training videos	42

REFERENCES CITED 44

Ongoing references for further reading	46
---	----

FOREWORD

In 2009, CTA published a book called *Video in Development: Filming for Rural Change*. The book captured many creative ways in which video was used in rural development and aimed to encourage development professionals to explore the potential of using video for development. That same year, CTA organised a seminar in Brussels on the role of media in the agricultural and rural development of ACP Countries. We have seen many initiatives using video ever since, but it is with great pleasure to see that by 2012 a completely new organisation had emerged that took up the challenge to become a global service provider to enable free sharing of farmer training videos.

This publication comes six years after Access Agriculture was created to enable south-south exchange and access to quality audio-visual training materials for smallholder farmers, herders and fishers, and other users of natural resources. It brings together some of the varied experiences of Access Agriculture's many partners in producing, translating, distributing and using training videos. These experiences have been gathered from reports, academic research, blogs, stories and interviews with people from Africa, Asia and Europe – who all have in common a passion for improving agriculture. It also draws on a series of stories published in a sister publication from CTA, "*A Passion for Video*", that were written in 2015 during Access Agriculture's conference to celebrate its first three years.

Access Agriculture in brief

An international non-governmental organisation which promotes the distribution and use of farmer training videos in local and global languages.

By 2015, Access Agriculture has facilitated the production and hosting of over 130 farmer training videos, translated into 68 languages (resulting in over 800 video versions), in 14 thematic areas (e.g. crops, livestock, business skills, etc.). These are freely downloadable from its video platform, www.accessagriculture.org.

Access Agriculture also trains media professionals, researchers, extensionists and others, to produce professional quality videos. The 10 to 15-minute videos hosted by Access Agriculture never promote a particular product or project; instead, the videos explain thoroughly researched, practical innovations or ideas that can help other farmers to find their own solutions suited to their context.

Access Agriculture also manages another web-based platform (AgTube, www.agtube.org) for people to upload agricultural videos that do not fit into the criteria of the Access Agriculture site.

Access Agriculture was set up with initial funds from the Swiss Agency for Development and Cooperation (SDC).

CTA is interested in sharing these experiences because at CTA we believe that investment in the right innovations in agriculture will help to catalyse development. Advances in electronic communication technology provide opportunities to use training videos, especially in support of agricultural advisory services.

The challenge is in delivering these services to the farmers that need them the most. Therefore, CTA focuses on the development of partnerships to implement climate-smart agriculture. The Access Agriculture approach has proven to be applicable in a wide range of contexts and geographical areas.

With the growth in social media, videos are increasingly being used to provide a rich context for sharing ideas and experiences. They are an increasingly important tool for learning, for facilitating cross-cultural exchange between smallholder farmers, and for strengthening value chain development. Sharing actionable knowledge is, and always has been, a strong component of CTA's activities. This publication is an important contribution to achieving this goal: charting a relatively new and valuable way to reach rural smallholder farmers.

Toby Johnson, Team Leader, Communications



ACKNOWLEDGEMENTS

Many people have contributed to getting this book, as well as its sister publication “*A Passion for Video*”, published. The authors would in particular like to thank Josephine Rodgers and Phil Malone for organising the 2015 Nairobi conference, and for galvanising such a wonderful team of writeshop facilitators and writers. The conference was full of high, positive energy and fun and it was a joy to be part of it. Also a big thank you to Paul Van Mele, for offering ideas for the outline, invaluable guiding comments during the writing process, and for bringing in co-authors who could add more depth to the story of Access Agriculture; Paul also coordinated the selection of photos and images for both publications. We are grateful to Krishan Bheenick who ensured that this book would be published in spite of unexpected obstacles even as he was leaving CTA. Finally, we would like to acknowledge all the people working on the ground for Access Agriculture, who enlivened this book through their insights on video as a tool to support farmer training in practice.

ACRONYMS

AAS	Agricultural Advisory Services
AMEDD	Association Malienne pour l’Eveil et le Développement Durable
CGIAR	Global agricultural research partnership
CIMMYT	International Maize and Wheat Improvement Center
CTA	Technical Centre for Agricultural and Rural Cooperation
FAO	Food and Agriculture Organization of the United Nations
GADC	Gulu Agricultural Development Company
GFRAS	Global Forum for Rural Advisory Services
HD	High Definition
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
ICT	Information and Communications Technology
IRRI	International Rice Research Institute
MAEP	Ministère de l’Agriculture de l’Elevage et de la pêche (Benin Republic)
NASFAM	National Smallholder Farmers’ Association of Malawi
NGO	Non-Governmental Organisation
NOGAMU	National Organic Agriculture Movement of Uganda
PV	Participatory video
SDC	Swiss Agency for Development and Cooperation
ZIZO	Zooming-in, zooming out



1

Video for agricultural training: approaches and issues

In a few minutes, videos allow a farmer to travel and meet other farmers who are dealing with similar challenges and improving their livelihoods and environment.

(Laura Tabet at the Access Agriculture conference, 2015).

INTRODUCTION

There are many advantages to using video to share ideas with an audience. To start with, it combines both visual and audio dimensions, bringing situations and faraway contexts alive in a way that written texts or photos on their own cannot. Video is attractive for training purposes because it shows actions that can be difficult to explain with words alone. Video is also an excellent tool for reaching illiterate audiences.

Video is highly versatile, and can go beyond entertainment to achieve development goals with particular audiences and objectives in mind. It can be shown in a variety of ways (e.g. at public gatherings, on television, on a mobile phone, and from the internet) with the potential to reach many people. Video can also be used to stimulate debates and discussions, and to help resolve conflicts. It can convey opinions and messages from one context or reality to another, in a way that makes unfamiliar issues more accessible to people - for example bringing farmer concerns to the attention of policy-makers. Video can offer an effective way of "documenting a process and compressing what could be a long story into a short film." It can translate "complex problems and processes into easily digestible pieces" (Lie and Mandler, 2009). Furthermore, video is useful as part

Nowadays, it makes a lot of sense to talk about using more videos to reach remote audiences, including farmers.

of a process, for example, to help collect data and to monitor changes over time.

Video can be easily adapted to fit different purposes, and it can vary in length from a short clip to a long film or documentary, or be shown as a series. When designing video for training purposes, the content requires great thought to be sure the information is correct and well organised, and that the video material is accessible and relevant to the trainees' needs and context. As the development of information and communications technology (ICT) continues to advance rapidly, and as internet and mobile phone connectivity improves throughout the world, many access challenges are becoming overcome. Nowadays, it makes a lot of sense to talk about using more videos to reach remote audiences, including farmers.

In agricultural training videos, the goal is to stimulate farmers (or other actors in the agricultural value chain) to change their behaviour towards more sustainable and productive practices. Box 1 describes the needs of farmer-training videos.

Box 1: What makes a video appropriate for agricultural training?

A farmer-training video exposes farmers to new practices while also explaining how and why they work. The message should be clear and focus on one main issue, and should encourage farmers to try out new ideas. The video explains how a technology works and lets the farmers decide if they would like to use it.

The video-makers must know their audience and focus on what is relevant to the viewers' interests and needs. The technologies and materials presented in the videos must be accessible to smallholder farmers. The content must also be understandable to farmers, students, and to the farmer trainers who show the videos. This means that messages should be conveyed in clear language, free of jargon.

Videos focused on specifically local issues will only appeal to a small audience. The training video needs to have a general enough theme that a broad farmer audience can relate the message to their own situation. The training video should also be designed to trigger farmer experimentation by building on the principles of adult education, experiential and discovery learning.

Finally, the video needs to be attractive (well made) and convincing enough that farmers are stimulated to actually go and try out new ideas and to adapt their practices.

THE PATH OF A VIDEO FROM CONCEPTION TO IMPACT

A lot of effort goes into making a good training video, then getting it to reach the target farmer audience, and ultimately to trigger positive changes in their farming practices. This path involves a series of steps, all of which the video maker needs to think about before unpacking the camera. These are:

1. Identifying and framing the topic
2. Producing a video
3. Making a video accessible
 - Translation into other languages
 - Distributing videos
 - Using and watching a video
4. Learning from video, and other impacts

The following section briefly runs through important issues relating to these different steps. For each step, Access Agriculture's approach is also highlighted.

Identifying and framing the topic

Identifying a topic and narrowing the focus of the video is a crucial but challenging first step to making a

video. The main topic may come from farmers, but not always. For example, if a new pest is about to reach a region, farmers may not even know it is on its way. Research helps to decide what would be a relevant priority issue for farmers. This involves consulting with stakeholders such as agricultural extension, research and development agencies - and it is vital that farmers, the target group, are involved in deciding what the topic should be. For Access Agriculture, finding a topic that can be relevant in many places is also very



Experienced onion growers in northern Ghana add their own expertise to a series of training videos.

important – farmers in different places often face similar problems, and are interested in finding out how farmers elsewhere tackle them.

Producing a video

Video makers need to answer a number of questions for themselves when embarking on a new video project, such as: where to film, who to film, how representative it should be (for example, finding a good gender and age balance), and how best to get the message across. Also, depending on the objectives of the video, video makers need to think about how (much) to involve different stakeholders in the production process.

There are many ways to make a video. Some video-makers have a clear idea about what they want the people of focus (in this case, smallholder farmers) to say, and guide their every word. In this case, the farmers have so little say over the video's content or script that the director might as well use actors instead of real smallholders. Other video-makers are so hands-off that they have the farmers themselves shoot the video. Participatory video (PV), for example, is a flexible method where the rural people help to shape the video as it is being made¹. When participatory video is taken to its logical extreme, community members can be taught to use the camera, make the video, and take it into directions defined by the community, giving them more ownership over the content. The storyline is therefore more spontaneous, and community members have free reign to speak. In this case, the filming may become more important than the final video, and the filming process can itself also be a development activity, for example to help bring up issues that are difficult to discuss openly. Such videos however tend to be of little use to communities that did not help to make them. Most videos fall somewhere in the middle, allowing farmers to speak freely, while professional video-makers shoot and edit the video.

In the case of a training video, the aim is to teach the target audience something that will lead to certain behavioural change (e.g. to produce cleaner milk or pest-free vegetables) - so the message is the backbone of the video. The video-maker therefore needs to guide the content from start to final editing, while inviting

ample participation from the farmers to help define the content. In Access Agriculture's approach, the video-maker consults with stakeholders early on, and often, to help choose what innovations to record, and to ensure that the information is accurate. This approach is explored further in Chapter 2.

The rest of this section describes practical considerations for three video production decisions: whether or not to make a storyboard and/or a script, the breadth of the audience to target, and the professional quality to aim for in the video.

Making storyboards, scripted or unscripted video

When organising the content to include in the video, video-makers may first want to develop an illustrated outline of what they would like to include, like frames in a comic book, as a guiding storyline. This is also known as a storyboard, which depicts the sequence of a storyline in pictures or drawings. A storyboard approach can lead to a scripted or an unscripted video, as it provides an outline without working out all the details.

The storyboard can include details about the content and sequence of the different shots, the materials required, camera focus, and so forth. Digital Green, an organisation working with video since 2006², uses a storyboard to create participatory farmer-training videos. Digital Green and local partners prioritise ideas about what behavioural changes need to be promoted



Fulani women in Nigeria have been trained to supply quality milk to an international company.

¹ Read more about Participatory Video in the PV Handbook by LUNCH and LUNCH (2006).

² For more information on Digital Green, see their website, www.digitalgreen.org.



By letting farmers read a one-page fact sheet, you can quickly test if your ideas for a video make sense.

and adapt the storyboard with farmers in their local language. Videos are made by filming extension agents or farmers who explain a particular technique, following the storyboard. Digital Green then uses the same storyboard in different sites, with the dialogue changing according to the speakers and the location (Hailu, 2015; [Digital Green website](#)).

If a video is made without a storyboard or script, the process of making the video is at least as important (if not more so) as the quality of the final product. For such videos, less time is spent on perfecting the images and the words, and the videos become a more subjective, spontaneous expression of the people filmed. But more is left to chance: the quality and focus of the topic can vary and the results are unpredictable. Completely unscripted videos tend to be more relevant in the particular local context where they were filmed and less relevant in other places (Chowdhury *et al.*, 2010).

A script can be developed from a storyboard or from a written outline. A good script gives local people as much flexibility as a storyboard, while also planning key elements to cover, and the shots that will be needed. A thoughtful script specifies only what the narrator will read, but not what the farmers will say on camera. The script for a farmer-training

video includes questions to ask the farmers, and their responses are later added to the script. A good script for training videos is based on well-researched and scientifically accurate content. From the earliest stages, script writers interact with farmers, asking them to comment on the ideas for the training video. The script keeps on changing, based on interactions with different stakeholders (farmers, farmer organisations, commodity buyers, processors, consumers, researchers, extensionists, etc.). The script goes through many edits and rewrites, also during and after the filming is done, until it reflects fully farmers' insights, practices and motivations, and it reaches the professional standard sought by the video-maker.

Access Agriculture hosts only scripted videos, each one with a mix of narration and farmer interviews. A script has the added advantage of allowing for easy translation of the videos into different languages, which is a key part of Access Agriculture's approach.

From the earliest stages, script writers interact with farmers, asking them to comment on the ideas for the training video.



Farmer-to-farmer training videos help the pastoralist Fulani to sell pure, hygienic milk.

Targeting a specific context only or producing for a broader audience

A training video must get the voice and language right, to ensure that the viewer can relate to the message and understand it. While some organisations such as Digital Green make videos for a specific context and language only, Access Agriculture encourages videos that can be viewed widely, in multiple contexts (with local translations). The video scripts explain well-researched ideas that real farmers have tried and adapted for their own use with locally available materials.

Most of the videos hosted on the Access Agriculture platform show several related innovations and explain why they work, allowing for cross-cultural learning, even between different continents. This is explained in greater detail in Chapter 2.

Using a dramatic format

Entertaining farmers with drama and humour can be a good way to get messages across. For example, Shamba Shape-Up is a “reality” television programme in which extensionists help farmers find solutions to their problems. Based in Kenya and broadcast in English and Swahili, it has become so popular that 10 million people watch it across East Africa

(www.shambashapeup.com, early 2016). However, a dramatic format does not work well when you want to translate a training video into other languages and show it in different countries. In Bangladesh, for example, agricultural research organisations developed five videos on planting, irrigation and farming equipment together with a local television producer, using a comedy-drama (soap opera-type) format. These turned out to be popular with Bangladeshi farmers. However, these kinds of videos are more relevant at a national level as they have been designed to appeal to farmers’ specific cultural and entertainment interests (Krupnik, 2016).

Working on the professional quality of the video

Making a good video demands attention to detail. A scientifically accurate script requires attention to research, and consultation with different stakeholders. Professional videos also call for high image quality (including attention to clarity, knowing how quickly to move the camera, when to pan or take a close up) as well as in the sound quality of speech and of added music. Access Agriculture seeks high **quality** in all aspects of its videos. As also shown in Chapter 2, this means that ample time must be given to the production process.

Making a video accessible

A completed video comes at the end of one path (production), but also marks the beginning of a new one: getting the video to a receptive audience. Before people can view a video, it needs to be made available to them - and be understandable. The video must be in the right language for the target audience. People also need to be able to view the video, even when they are living in remote places. There are many ways to distribute the videos to farmers.

Translation into other languages

Making training videos accessible to viewers includes making them available in local languages. In the Digital Green approach, for example, local people in different areas fill in the details for the same storyboard. In this way, each area receives its own video in its local language (or even dialect) and reflects the specific reality of the local context (Hailu, 2015). This requires filming the video several times over, each time in a new language.

The videos hosted by Access Agriculture all have scripts and are therefore easier to translate and can be used in different contexts. Like filming, translation also requires an eye (or an ear) to detail. Access Agriculture scripts include a mix of narrations and farmer interviews (usually recorded in local languages). The interviews are then carefully translated into a widely spoken base language (commonly English or French). Each language version is narrated by native speakers of that language who are usually professional radio broadcasters.

Access Agriculture's DVD video compilations can include up to 10 videos in eight different languages on a single DVD. A language menu allows the viewer to first choose a language, and then to watch the videos in any order.

Distributing videos

There are many ways to distribute videos: on DVDs, as web downloads, as broadcasts by TV stations, or even as audio tracks on radio shows. Videos can be shared by Bluetooth on mobile phones or through mobile memory cards on cheap, ordinary cell phones.

Many organisations can get involved in distributing training videos, including government extension services, private companies, universities, and local and international NGOs. Videos can be picked up by enterprising commodity buyers, input dealers and even tea-stall owners, who find different ways of getting the videos out to farmers. Chapter 3 presents different video distribution experiences of Access Agriculture and its partners.

Using and watching a video

Agricultural training videos can be aired on radio or television for mass audiences, or they can be shown by organisations as part of a training extension programme, in farmer clubs, or as community screenings. An extension agent can facilitate the video viewing, answering questions, guiding discussions, and following-up with activities such as demonstrations and experimentation.

Access Agriculture has a hands-off approach, making videos freely available to anybody to download from its video platform and use in different ways. While Access Agriculture rarely shows videos itself, it has formed formal partnerships with over 70 organisations that use the videos from its platform in their own farmer-training programmes. Access Agriculture does not pay its partners to show videos, but relies on the high quality of the sound, photography and content to motivate



Access Agriculture trains communication professionals across the South to translate video scripts into local languages and record voice overs.

people to do this on their own initiative. A recent global online survey (Bentley et al., 2015a) found that over a thousand organisations have used these videos for training, without being formal partners to Access Agriculture.

There are many challenges involved in showing videos, particularly in villages on dirt roads that are off the electrical grid and without internet access. These challenges can be overcome, as discussed in Chapter 3.

Studying learning from video and other impacts

Agricultural training videos aim to share new ideas with audiences so that they will learn from and use this information to improve their livelihoods. Learning does not stop when the video ends, but continues as farmers (or others) discuss it and experiment with the innovations they have seen. The video can be part of a facilitated package, such as a farmer training programme that includes practical field exercises. What people learn from a video can be seen from how they use the information conveyed, for example if they have changed any farming practices. Watching a video may also lead to social changes, such as the formation of new groups. Videos also have the advantage of reaching youth, women or disadvantaged people who are normally excluded from formal extension training.



Access Agriculture targets women in particular, as they have been most ignored by agricultural advisory services.

Agricultural training videos can be aired on radio or television for mass audiences, or they can be shown by organisations as part of a training extension programme, in farmer clubs, or as community screenings.

Measuring the impact of training videos is challenging, particularly when they are freely available through the internet and other uncontrolled channels. To know the full impact, it is necessary to be able to track how many people watched the videos, and then how many put new ideas into practice. When videos are used as part of an organised extension programme for a particular group of farmers that can subsequently be asked about changes made, it is easier to measure impacts. Nevertheless, researchers can study impact of videos by comparing the effects of different methods used for distributing and viewing videos – for example, studying what farmers learned or retained from a video when it is viewed with or without a facilitator, what types of activities accompanied video viewing, or what farmers or groups did after receiving a DVD of their own. Various follow-up studies carried out by university students and social scientists have shed some light on the impact of Access Agriculture-hosted training videos, as described in Chapter 4.

The following chapters highlight experiences of many people who have produced, distributed and used training videos around the world, along the Access Agriculture model. The final chapter summarises these insights, which will hopefully help others to use training videos to support farmers in improving their farm systems, and livelihoods.



2

Experiences in video production

Making a video is as much about shaping relevant content, as it is about managing local expectations.

(Jane Nalunga at the Access Agriculture conference, 2015)

A farmer-training video must have more than pleasant images and an engaging sound track. Videos hosted on the Access Agriculture video platform are all practical, with sustainable farming themes, directed at helping small-scale farmers in developing countries improve their production and incomes. These videos are farmer-to-farmer, and so are hands-on, without academic jargon, using words that everyone knows. Farmer-to-farmer video also means that farmers themselves (rather than a technician or researcher) explain, and more importantly show, how they do things that work - and why.

Since 2012, Access Agriculture has trained agricultural and media professionals to produce high-quality farmer-training videos in Bangladesh, Benin, Egypt, Kenya, Malawi, Mali and Uganda. The training includes a course on script writing, where participants write a one-page fact sheet on a subject they know well. This is validated by farmers, and edited into a draft video script.

The writers consult with villagers, to harmonise the scripts with farmer ideas and practices. Later, the writers invite other experts to comment on their draft scripts. Access Agriculture gives other support so that the videos are of professional quality, and are then placed on the Access Agriculture platform (www.accessagriculture.org).

The core of Access Agriculture's approach to video is called ZIZO ("zooming-in, zooming out" – see Figure 1). This method was developed by Paul Van Mele to produce videos that can be used in different contexts. Training on the ZIZO method is part of the organisation's video production course mentioned above. ZIZO starts with a broad stakeholder consultation to define the learning needs of a region. Practical technologies are identified and adapted, often through farmer field schools (FFS)³ or other collaborations with rural communities. Projects that have used FFS or other discovery-based learning are well placed to help develop farmer-training videos. Focus group discussions with field school graduates reveal how farmers have fine-tuned a technology. These discussions document farmers' innovations, knowledge and vocabulary related to the topic (*zooming-in*). The videos are usually filmed with some of these empowered farmers.

The videos are carefully planned, but the script continues to be edited as the production team learns from expert-farmers and focuses on promising technologies. The video team also shares the advanced script with researchers and other experts, for constructive criticism. If possible, the draft videos are then shown to more villages (*zooming-out*), which leads to more innovations and ideas being identified. The script continues to evolve as the video content

³ See FAO, 2016 for a description of farmer field schools.

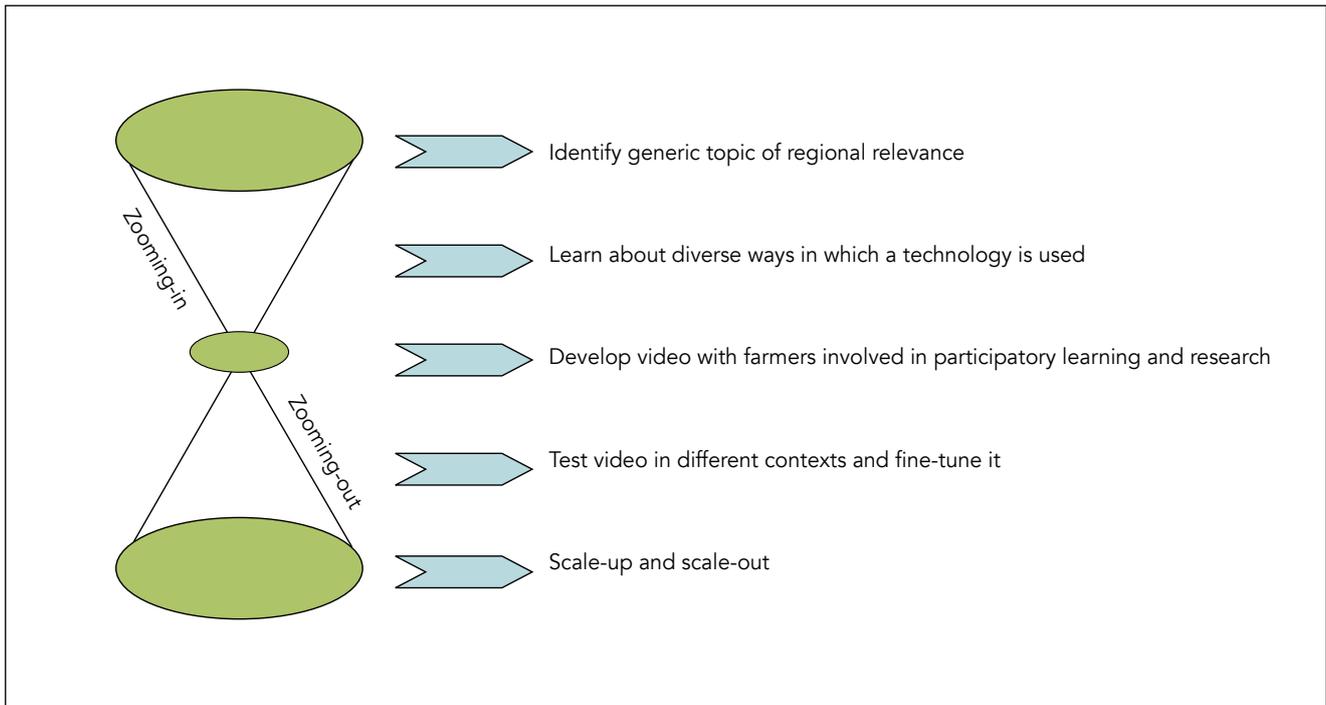


Figure 1: ZIZO (Zooming-in, zooming-out) video production approach of Access Agriculture

and format are fine-tuned to accurately depict the technologies, the ideas and the motivations of the farmer-experimenters. The final script can be translated and the soundtrack recorded in other languages. The videos can then be made available to intermediaries, such as other media and distribution channels.

Below, a number of Access Agriculture’s trained video producers share their experiences with video production, and give their tips on how to deal with challenges.

GETTING STARTED: IDENTIFYING THE SUBJECT AREA OF THE VIDEO

In deciding what to film and while writing the script, video-makers need to research the problems farmers have with a particular crop or livestock technology. Following the ZIZO method, ideas can come to a video producer from different sources. For example,

an NGO client might suggest a topic for video. The video producer then needs to talk to people who have trained farmers on that topic and to also read scientific literature to better understand and refine the issues involved. This research process must also reveal how farmers creatively address a problem or adapt technologies. By having farmers help determine what practices to highlight in the video, Ugandan film-maker Jane Nalunga explains that “you are less likely to forget key elements that matter to them” (2015). However, this process of consultation can be difficult, especially in an area where projects are run in a top-down manner.

This was the experience of Laura Tabet, of Nawaya in Egypt – where large donor-funded projects often seek to promote their own approaches or technologies that are not necessarily what farmers themselves want. “We discovered that many rural development programmes do not collaborate with each other in sharing curricula or lessons learned,

Combining visual images and sound, videos can bring ideas alive in a way that reading or hearing about them cannot.

creating a vacuum in understanding the real farmer training needs versus their programme objectives” (Tabet, 2016). The team in Egypt found that they first needed to produce a few quality videos through their own contacts, people they knew well. Showing these videos to communities made it possible to attract other farmers to identify topics and to volunteer to be interviewed. The team was then able to film in villages where they had not been well known, and to cover new topics.

From the National Organic Agriculture Movement of Uganda (NOGAMU), Jane Nalunga (see Tamubula, 2016) also finds it essential to first develop a relationship with the farmers, before she can produce a good training video that serves their needs. But even after cultivating these relationships, Nalunga has to balance people’s different reasons for taking part in a video. Farmers or other villagers might volunteer because they know the person making the video, and they want to share their ideas, or they may hope to curry favour. They also take pleasure in seeing themselves on video. Extensionists or organisations may hope that the video will help them to bring information to farmers. And they like to see themselves on video as well. People from different walks of life have different agendas, and a video producer needs to find ways to work around the more powerful personalities in order to get to the perspectives of more vulnerable people (such as women, youth and poor farmers). Nalunga has learned to navigate this situation well, as explained towards the end of this chapter.

FRAMING THE SCRIPT

Access Agriculture emphasises writing a detailed script to guide the video production process. But this is not a Hollywood script, and no one has to

memorise their lines. An Access Agriculture script is a living document that evolves as the video is created. Before filming, the video-makers meet with groups of farmers who explain how they do certain things and why. Later, often the next day, the crew films the farmers as they demonstrate their techniques. Individual farmers speak into the camera, describing why these actions work. Parts of the interviews are shown in the video, just as they were filmed, while some farmer insights are added to the voice-over narrative. The script is constantly edited as it is enriched with local knowledge.

Framing a video for learning

A lot can be learned from a video. Combining visual images and sound, videos can bring ideas alive in a way that reading or hearing about them cannot. In Access Agriculture’s experience, the best training videos are based on a discovery-based learning approach. When viewers understand why an innovation will solve their problem, and why the problem is there in the first place, they are better able to adapt the solution so that it works well in their own context. For example, when looking at ways to improve home storage of rice seed, it is important that the viewer understands that the key is to keep out moisture. The video *“Rice seed preservation”* explains that rice seed must stay dry or it will rot. The video goes on to show some examples of



Good videos show practical ideas that farmers in different contexts can apply.



Farmers in southern Uganda keep maize stalks to stake their climbing beans.

Bangladeshi farmers making barriers to moisture (e.g. painting an earthen pot or coating it with used cooking oil or tar). With this information, viewers elsewhere can then create solutions using whatever materials they have available locally (e.g. using shea butter to seal the pot or keeping rice seed in a very dry room).

Because it is so helpful to explain why an innovation works, Access Agriculture training workshops recommend starting with a farmer-friendly fact sheet. This three-part “snowman outline” (Bentley and Boa, 2013) is named after the three snowballs that make up a classic snowman: the head (which describes what is the main problem to be addressed), the middle (the scientific background that explains why the problem exists and why the suggested solution will work), and the main part (how the innovative technologies will solve the problem).

The middle section (why) is the most difficult part for fact-sheet authors to grasp and it is also the most important part for helping the audience to understand. Access Agriculture facilitators advise the authors to write the middle part last so that they can see it as a bridge between the problem and the solution. After defining the problem and the solution, the author can then work backwards, to explain

(from the farmers’ perspective) why a particular innovation works. This requires empathy and a lot of consultation with farmers. For example, in the above example of the rice seed video, the problem is seed rot; the solution is to paint your clay storage pot, but that makes little sense unless you grasp the reason why (the middle of the snowman): paint keeps out moisture which contributes to rot.

Part of fact sheet writing is to subject it to “farmer peer reviews” to be sure that the explanations and ideas are clear and jargon-free. Comments from different farmers also tell how they solve the problems at issue. For example, in a 2014 blog, Paul Van Mele (2014b) followed writer Grace Tione in Malawi as she got different farmers to review her fact sheet on growing pigeon peas. While Grace had been focusing on how pigeon peas improve soil fertility, the farmers gave her new information about growing and intercropping pigeon pea with maize. They told her that pigeon pea suppresses weeds, is a low labour crop, and they gave tips on spacing and how to adapt practices to intercrop it with maize. All of these interactions enriched the fact sheet.

Writing the script and making it relevant for different contexts

Once the fact sheet is validated by farmers, and edited to address their concerns, it can be used as the start of a video script. A video needs to encourage learning and experimentation if it is going to appeal to farmers in different countries and contexts (e.g. including irrigated or dryland farms, medium- or smallholders, subsistence or market-oriented farmers, men and women). A flexible script therefore offers several options for solving a problem.

For example, another 2014 blogpost by Paul Van Mele tells about an experience from Benin, where a local NGO trained in video production (DEDRAS) needed to modify their fact sheet on soya production to reflect different realities even within their country. A script was written in the north, where the land is flat and tractor-friendly, but when farmers in central Benin saw the script, they said that their land was too hilly and rocky for tractors to plough. So the video needed to show other options, such as preparing the land with hoes before planting soya. Talking to farmers in other areas then led to more changes in the script, such as information on saving seed on-farm and how to keep rabbits from eating the tender plants. Van Mele writes that it *“took the ... video team five months and eight versions of the video script, and another two months to film and edit the programme (on top of six versions of the initial fact sheet).”* (Van Mele, 2014a).



Well-made videos allow farmers to learn from their peers and to adjust the ideas to their own context.

Laura Tabet from Egypt (2015) also stressed the need to put great effort into video script-writing: “One of our videos required 16 versions before we got the script right!” Alcide Agbangla from the Songhaï Centre in Benin describes how he must collect as much information as he can for his videos. He sees this as a learning process for himself as well – like going back to school again. He reads a lot and asks farmers many questions to be able to understand different sides of the topic: *“When I am developing a video, my questions do not dry up until I understand the topic completely”* (Agbangla, 2016).

Reflections about video relevance

Jamesson Dennish Onekalit has used Access Agriculture’s videos in Northern Uganda, where Mercy Corps paid to translate 34 Access Agriculture videos into the Luo language, and then disseminated 1,000 DVDs for a value chain development initiative, encouraging smallholders to grow chilli and other crops for sale. Onekalit wondered how relevant the videos, which were all produced in West Africa, were for this context. Northern Uganda has a long dry season, but much of the soil is highly fertile. Some of the chilli videos were made in sandy, humid coastal areas. Chilli is new in Northern Uganda so Onekalit questioned whether the videos could inform the farmers sufficiently about how to grow the new crop in their soil. In this case, a private agricultural commodity-buying company (GADC) provided good facilitation (e.g. advice on spacing) and follow-up support (such as providing seed and buying the harvested product). The videos motivated thousands of farmers to start growing organic chilli (conversation with Onekalit, 2015; see also Bentley, 2016).

Government and media officials sometimes complain about using videos from other countries and cultural contexts. Yet farmers see the videos differently. In Access Agriculture’s experience, farmers can relate to the technologies or landforms shown in the videos, and are not concerned about cultural differences. In a 2011 article, Jeff Bentley and Paul Van Mele wrote about farmers they had talked to about this:

They did not care about the skin colour of people in the film or how they were dressed or whether the background music was Asian or African. The farmers saw the techniques, things like the size of the pot, tarps that could be used to keep rice free of stones, and transplanting rice. They even analysed technical content that was only shown in the images but not mentioned in the narration, like the width of the hoes. Nigerian rice farmers who watched the videos from Mali noticed that the land is flatter in Mali than in Nigeria, that is, they were paying attention to geomorphology, if not to “culture”.

Cross-cultural videos can provide information from distant farmers who struggle with similar problems but have come up with a solution that can be very inspiring. In a 2015 blogpost, Paul Van Mele describes a simple hand tool that Thai farmers have used for 20 years to pry cassava roots out of the ground when harvesting. The tool could save backbreaking work for African and Latin American farmers, while doubling their harvest speed. The innovation could take many years to spread from Thailand to Nigeria or Colombia by word of mouth, but a **video** can share the idea almost instantly.

CAPTURING AND EDITING

The videos hosted by Access Agriculture are on average 10 to 15 minutes long, with scripts between 1,000 and 1,500 words. But even a short video can take many months to produce. Just like script-writing, filming requires attention to quality and detail. It is not a matter of “*just going to the field and pointing the camera*”, as some extensionists and researchers assume (see Bentley, 2015). The Access Agriculture intensive training course on video production comes in two parts, a five-day course on script-writing and planning, followed later by a two-week course, in which the first week is spent filming and the second week is for editing the videos. Every step of the way, the three main points are details, details and getting the details right. Access Agriculture’s video platform lists recommendations

on **equipment** that can be used, in order to get good quality of image and sound when capturing.

The Access Agriculture video production guide (Chepyegon et al., 2015) stresses the importance of good planning before going to the field to capture footage. The guide recommends making a detailed schedule, a list of the required shots, and deciding who should participate at which moments. Questions to be asked during farmer interviews should be prepared ahead of time. The filmed interviews have to be transcribed, word for word, and translated from the local language to English (or French or Spanish).

Before filming, video producers must communicate to others clearly about what will happen. According to Jane Nalunga (2015), who has produced several videos, “*making a video is as much about shaping relevant content, as it is about managing local expectations.*” Some farmers may even expect to be paid to help make the video. After spending a lot of time preparing for a video on cowpea thrips (an insect pest) in rural Mali, Gilbert Dembélé from AMEDD, an NGO, was shocked by the reaction of a key farmer participant. “*After having travelled 170 km, I arrived for the second shooting at the appointed hour with my driver, my assistant and all my equipment*” – only to be confronted by a farmer who refused to shoot without being paid. Dembélé was not able to change the farmer’s mind and had to return without getting the shots he needed. It turns out that this particular community had recently paid the national TV station a lot of money to cover a village event. The farmer wanted to recover some of that money. Unfortunately, he thought that if one film crew had taken his money, another film crew could pay him back. Dembélé concludes that he should have spent more time building a relationship with the farmer and the community before shooting (Dembélé, 2016).

A video needs to encourage learning and experimentation if it is going to appeal to farmers in different countries and contexts.



Quality farmer-training videos have encouraged tens of thousands of women in Uganda to engage in organic value chains.

After filming, a good video requires a lot of time investment to edit and to perfect the final details. For example, deciding precisely where to cut the images, then adding interview footage, voice-over and music, all require great effort before everything fits well together. In the process of editing, the video producer might even find that parts of the transcribed interviews can improve the script. This then means that some parts of the voice-over may need to be re-recorded. This process can try the patience of not only the video-makers – but also of all the other people who worked on the video, who do not understand why they must wait so long to view the final results. As video-maker Jane Nalunga says from experience, “*while the producer works hard to finish the video before the end of the year, farmers expect to see the finished video the week after filming*” (Nalunga, 2015).

CLEAR COMMUNICATION AND VIDEO PRODUCTION GOING HAND IN HAND

During the Access Agriculture conference in 2015, many partners voiced the need to build relationships with everyone involved in getting the video made, and to communicate clearly. This helps to manage power struggles that emerge, and also contributes to better quality videos, as explained below.

Video-makers often face interference from different people who feel that they should be the one telling the story. They may be community leaders wanting to be in the video, or men taking the floor while women step aside, or even elders answering questions that were asked of youths. Jane Nalunga’s advice is to film interviews with all of these people, but to explain that only the best footage will be selected in the final cut. She recommends filming according to the following sequence: first community leaders, who will then leave, next male farmers, followed by the women who will no longer keep to the background once the men have left, and lastly giving the word to the youths, who will be less shy when the adults are out of the way (Nalunga, 2015). This does however assume that the women can wait this long; they are often the busiest people. Some video producers take a more direct approach, tactfully explaining to the village leaders that certain women and men have already been chosen to speak, based on their knowledge of the topic.

Irene Tamubula’s research for Makerere University in Uganda, found that video-makers must build trust with local people when producing videos with them. Good relationships – and clear communication – help to ease the work in the field. However, getting the

right messages in the video can mean that you will have to disappoint some colleagues. For example, officials who help to mobilise farmers for research or video recording, may then want to be in the video. But during editing, these leaders may have to be cut out. They might not fit into the needs of the final version, or they might not have been very articulate, so they are replaced by better clips. The video-maker must explain these kinds of decisions in the field and again after the final video is out. As Tamubula (2016) says: *"If a video-maker is forced to choose between hurting a colleague's feelings and making a bad video, most would delete the interview, and then apologise to the person who is left out."* These are some of the consequences of wanting to end up with a professional quality product, and keeping control in the hands of a video-maker.

Access Agriculture's video production partners say that building relationships with the community where filming will be done is necessary for success. A relationship can start by visiting communities where

farmers have benefited from previous intensive training (a core principle of the ZIZO method). Their advice is to make it clear from the start that you are not going to pay anyone. Explain that the video will not be sold, but that it will be used for training others. This helps to manage the participants' expectations. Screening another farmer-learning video in the community also helps to motivate farmers to support the video. Another sound approach is to give farmers a training DVD during the first focus group discussion, ahead of the actual filming. This helps to get the dialogue going and to build the trust needed to work together.

Video-makers must build trust with local people when producing videos with them. Good relationships - and clear communication - help to ease the work in the field.



Video production with farmers is a bonding process you can't rush.



3

Experiences in making videos accessible

We have challenges, such as the lack of electricity, and language barriers. But we are working things out. We are learning by our experience.

(Donald Tchaou, 2016)

For a few coins, the customers can get their flash discs, or the memory cards of their cell phones filled up with films to watch at home, in cities and in rural areas.

(Ronald Kondwani Udedi, 2016)

Access Agriculture is eager to share its fast-growing collection of training videos with extension service providers and smallholder communities in developing countries. All videos are freely downloadable from the internet, a service that mainly targets the service providers. To reach out to farmers, Access Agriculture has distributed multi-language DVDs through community radio stations, extension services, farmer organisations and NGOs, mostly in sub-Saharan Africa. It has also partnered with international and local organisations that have agricultural training programmes. Some of these organisations have paid to translate training videos hosted on the Access Agriculture platform into local languages.

Partners have found other ways to get videos to farmers, such as public viewings and more recently converting videos into formats that can be watched on mobile phones. This chapter discusses practical issues that Access Agriculture partners have experienced in the translation, distribution and use of videos.

TRANSLATING VIDEO INTO LOCAL LANGUAGES: AN EXACTING TASK

Access Agriculture encourages its partners to produce videos that can be viewed in many contexts. Experience shows that farmers appreciate learning from their peers in other places. South-South learning among farmers demands translation into different languages. Videos based on solid script research, according to the ZIZO method, are locally appropriate and regionally relevant, and can be translated for viewing in distant places. For example, the first videos hosted on the Access Agriculture platform include a series of eleven videos on growing and processing rice; four of these were produced in Bangladesh and the remaining seven in Benin and Mali. These “Rice Advice” videos have been distributed on around 40,000 multi-language DVDs to thousands of farming communities in East, West and Southern Africa. The videos translated into local languages were used by over a thousand organisations across Africa by 2010 (Van Mele *et al.*, 2010). They have been much appreciated by farmers (and extensionists) throughout Benin (see Okry *et al.*, 2014). In Uganda, viewers clearly liked getting



Increasingly, farmers across the South watch videos from the Access Agriculture video platform on their mobiles.

fresh ideas from real farmers in other countries (see Bentley *et al.*, 2013a). One farmer, Christopher Nsamba, remarked: *"When we saw the mud on those people's hands and on their legs, we knew they were real farmers, even before they started speaking. And when we saw their chickens and their dogs—they are the same animals we have here. So we knew that if those farmers could do it [improve rice yields], we could, too."* (Bentley *et al.*, 2013a; p.7).

Well-made videos carry a lot of information through the visuals. But farmers get much more out of the video if they can understand the language. Videos in the local language are especially helpful when farmers want to watch the videos on their own, without outside facilitation. Besides this, it is much more expensive to make a good video than to translate one. Translating a video costs about one-tenth of what it costs to produce a new one (Bentley *et al.*, 2013a). Having a script in English or French makes the task easier. Yet producing a high-quality translation also requires some effort, so Access Agriculture provides translation workshops to its partners.

Mark Maiga, from Farmers Media in Uganda, writes about his experience participating in an Access Agriculture translation workshop (see Maiga, 2016).

He had previously worked on translating a video script into one of his country's languages, Luganda. However, in discussing it at the workshop, he discovered that his translation was not good enough. Luganda has four main dialects and the script needed to be written using words that speakers of all the four dialects can understand. In the end, Maiga found he had to change practically the whole script before he got it right.

Most languages have different dialects, even English, as the Americans and British are constantly discovering (for example, the rubbery bit that erases pencil marks is called "eraser" in the US, but "rubber" in the UK). The 34 videos translated into the Luo language of Uganda used some terms from two dialects (Acholi and Langi). This meant that some words were new to everyone, but the extensionists had more complaints about this than the farmers did. Although the local words for "chilli" and "sesame" for example vary from one place to the next, the video images allow the audience to understand their meaning. The northern Ugandan farmers said that everyone in the audience understood the videos translated into Luo (Bentley, 2016).

Once a script has been translated, it is necessary to find people whose voices record well to read the

different script voices. In a 2015 blogpost, Bentley describes the long process of recording a translated script into a new language. The voice recording has to fit perfectly into the original edits (for example, an eight-second shot in English has to be eight seconds long in Spanish as well), so the people reading the script cannot make any mistakes and must read it in exactly the allotted time. Also, the translation must convey the same meaning as in the original text. This requires a skilled team, and it helps if the translator can go to the studio for final fine-tuning during the recording.

GETTING VIDEOS TO (SMALL) FARMERS IN REMOTE AREAS

Eletina Cosmas is a smallholder in Malawi who appeared on a video made by Tamanda Chabvuta, from NASFAM, a farmers' organisation. Cosmas explains how challenging it is for her to manage to watch a farmer-training video. There is no electricity in the village and it is too expensive to pay for a generator, a solar panel, or to charge any equipment. She has an old mobile phone, but she does not always have enough money to pay someone to charge it for her. She cannot watch a DVD because she has no television, and neither do the members of her farmers' club. She does not feel comfortable as a woman watching a video in the village centre as the video hall is too close to the liquor store. These are



Community radio stations and TV stations make good use of quality farmer-training videos. Some also distribute or sell videos to farmers.

Well-made videos carry a lot of information through the visuals. But farmers get much more out of the video if they can understand the language.

the kinds of obstacles that farmers face when they watch agricultural training videos. (See Chabvuta, 2016).

Nevertheless, Access Agriculture's partners are finding creative ways to show the videos to remote areas, especially in Africa. Many of these (young) people attended the Access Agriculture 2015 conference and told their stories, a selection of which were published in *"A Passion for Video"* (Bentley, et al. 2016). Some of their experiences are summarised below, and show that most of the obstacles standing in the way of bringing videos to remote farmers can be overcome.

Using video in radio or television broadcasts

Videos hosted on the Access Agriculture platform can be broadcast on television, and radio stations also play the voice tracks over the air. Access Agriculture does not pay broadcasters, but the videos are good enough that TV stations have aired them for free in Bangladesh (local cable TV stations and BTV), Benin (BB24, Canal3 and Tunde Agric TV), Burkina Faso (Radio and Télé Nationale), Burundi (Télévision Nationale du Burundi), Central African Republic (Télévision Centrafricaine), Democratic Republic of Congo (community television of Kinzau-Mvueté), Gambia (GRTV), Ghana (Channel 5 TV), Guinea (RTG), India (Green TV), Kenya (Farmer's TV and WTV), Malawi (Channel of All Nations, Luntha TV, MBC, Times TV and ZBS), Mali (ORTM), Nepal (NTV), Niger (ORTN, Canal3), Nigeria (the Federal Nigerian Television Authority as well as the state-owned Broadcasting Service of Ekiti State), Uganda (NTV and UBC) and Vietnam (VTV2) (list from Access Agriculture website, August 2016). More TV stations,



Community gardens in West Africa centered around a well and protected from free-roaming animals.

particularly from Cameroon and Egypt have also contacted Access Agriculture to air videos.

In several countries, Access Agriculture partners with community radio stations, to help distributing its DVDs of training videos. For example, radio stations in Benin and Malawi have announced that the DVDs were available for farmers or farmer associations. In Benin, about 20% of the farmers actually bought the videos from the stations, while the rest were given away for free. A few other partner radio stations in Benin extracted certain parts of the “Rice Advice” videos as audio files, and aired them or used them to organise talk shows, round tables or quizzes. However, some stations do not use the sound tracks, hoping that someone will pay them to do so (Okry *et al.*, 2014). Radio Moutian in Tominian, Mali has played the sound tracks of the 10 videos on managing the *Striga* parasitic weed three times in the Bambara language and many, many times in Bomu, the local language. About 50,000 farmers have heard them (Bentley *et al.*, 2014).

Organising community screenings

Community screenings can reach many people living in remote regions. Screenings can be organised

in schools, community centres, farmer association halls, outside on the village green or on the school playground. In Bangladesh, popular locations for public screening are tea stalls and community-based organisations.

Public screenings in remote areas call for some logistical planning. First, having relevant videos available in the local language; second, getting the videos to the villages; and third, finding a way to screen in places without electricity. A recent study in Benin shows that when the videos are not yet available in local languages, organisations can screen the videos twice in unknown languages to allow optimal learning (Bede, 2016). The study concluded that the clear images in videos hosted by Access Agriculture compensate somewhat for a lack of understanding of the spoken words.

In Ghana, different government ministries use mobile information vans, but not in remote areas in the north, in part because of bad roads. Raymond Vuol from Countrywise Communication, Ghana, responded to this gap by designing a “video tricycle” (a three-wheeled cargo motorcycle) to screen training videos in remote villages. He modified the tricycle cargo bed, adding compartments to hold a generator, two DVD players, a set of DVDs, a

projector, a screen and a loudspeaker. Then in 2013 he started organising village screenings of videos from the Access Agriculture platform and other videos of interest to these far-flung communities. He hired a young agricultural graduate named Adam to go to the communities. Adam often stayed in remote areas for up to two months. Since Vuol's staff is flexible, willing to live roughly, and knowledgeable enough to answer the farmers' questions about the videos, he has come up with a sound business model for showing videos far off the tarmac. With modest funding from different organisations, Vuol has reached more than 60,000 farmers in 244 communities within two years. He now has two three-wheeled vans because of the high demand for this service (Vuol, 2016).

In Benin, Donald Tchaou's youth action development enterprise, TIC Agri-Business Centre, regularly shows videos in remote communities, using a laptop with a video projector and a loudspeaker. Where there is no electricity, they use a generator. Besides the Access Agriculture videos, they also show others to raise awareness on health issues such as cholera or tuberculosis. The organisation has come to prefer working directly with farmer associations, with groups of 15 to 20 enthusiastic farmers. The youth organisation talks to the villagers afterwards, to discuss what they learned from the videos. (Tchaou, 2016).

Rapid technological advances in solar energy and lighter projection equipment are making screenings in remote regions easier and easier – as explained in the sub-section on Technologies below.

From watching DVDs to distributing digital files to farmers

Farmers with equipment at home can also choose to watch the Access Agriculture DVDs. Most African villages now have at least one household that owns a TV set and a DVD player. Many villagers can now afford to buy DVDs. When a DVD of agricultural training videos is in the hands of farmers, they often watch the programmes over and over, usually with friends or family. Most African villages still

lack electricity, but cheap solar panels are now found everywhere, used mainly to charge cell phones. Recent developments in communications technologies have revolutionised the way remote farmers can access agricultural training messages. And technology keeps evolving!

In Malawi, for example, change has been rapid since 2011, as Ronald Kondwani Udedi, from Malawi Polytechnic, explains. In the small market towns, some forward-thinking youths could afford to buy second-hand computers. These youths (who call themselves DJs) started opening "burning centres" in their villages. These centres often involved "nothing more than a PC on a table in a small room."

The burning centres copy movies and music videos onto people's flash discs, memory cards or DVDs, for a small fee. The DJs convert videos into 3gp (Third Generation Partnership) format which their customers can watch on their phones. In spite of their small screens, even the cheap (non-smart) mobile phones allow almost anyone to watch videos – including farmer-training videos. In 2014, Udedi offered the DJs Chichewa-language videos from the Access Agriculture platform. Two years later, 96 DJs were distributing training videos from the platform to an increasing number of farmers through their burning centres.



Farmers have become the largest professional group downloading videos from the Access Agriculture platform.

Finding technologies to overcome lack of electricity

Off the electrical grid, you can bring a generator (if you have a car or a motorbike), but there are other ways to get power to remote communities. A laptop battery can last for several hours. Compact pico projectors can go a few hours without electricity. Solar panels are another popular energy source. One can now buy a “smart projector” that has portable solar panels to charge batteries for its small, but powerful projector. The smart projector comes with an external hard drive loaded with all videos hosted on the Access Agriculture platform (which can be regularly updated through the internet). This innovative device makes it even easier for partners to organise community screenings without being connected to the grid or internet. As the projector weighs less than one kilogram, it can be put in a backpack and taken to remote areas by motorbike!

Selling Access Agriculture videos through commercial channels

Some farmers are willing to pay for videos themselves, such as those farmers who bought DVDs from radio stations in Benin. Research by Gérard Zoundji, a PhD candidate at the University of Abomey Calavi, Benin, shows how vendors in large cities of Benin have been able to sell a DVD containing nine farmer-training videos on vegetable production (Zoundji, 2016; see also Zoundji *et al.*, forthcoming). The compilation included versions in English, French, Yoruba, Fon and Bambara. Zoundji sold the DVD in 2015 for less than two dollars through small businesses (such as entertainment DVD shops, agro-input dealers, vegetable sellers and motorcycle-taxi drivers). A phone number was included on a note inside the DVD jacket in case buyers wanted more information. In no time, of the 392 videos sold, 276 people phoned the number. One-third of these buyers lived surprisingly far away (e.g. northern Benin, Niger and Nigeria), and some belonged to farmers’ associations. The callers mostly asked where they could buy more videos, and many also wished to know where to get the intriguing drip irrigation

equipment they had seen in one of the videos. Zoundji concluded that small-scale retailers can distribute videos to rural people, and they will reach farmers who seriously want to use the content and would even be willing to pay for it (Zoundji, 2016).

MEASURING VIDEO DISTRIBUTION TO FARMERS

Because Access Agriculture offers its videos freely on its platform, it is difficult to track how many people watch the videos and exactly who they are. However, tracking videos distributed on DVDs is not always much easier. For example, in the East Africa experience with the “Rice Advice” videos mentioned below, 20,000 DVDs were each accompanied by a letter (in English, French and Swahili), asking the user to tick off a few boxes, write in a couple of lines and send the letter back by regular post. Not a single person responded to this. However, as described above, Gérard Zoundji had better luck when he asked the buyers of his DVD to phone him up.

Up until now (2016), the CGIAR (global agricultural research partnership) centres have been the most active in distributing Access Agriculture videos widely (on DVDs, but also inviting TV stations to broadcast them). These international research centres commission a set of videos to be made, usually on a theme that the centre has studied in collaboration with farmers. The videos are translated into several languages, printed on thousands of DVDs, and distributed to farmers through different channels (Bentley *et al.*, 2015a). For example, Africa Rice Center in Benin oversaw the translation of the 11-video “Rice Advice” series into languages of West and East Africa. Africa Rice Center then engaged with the East African organisation Kilimo Trust, which paid for 20,000 copies of the DVD, which were distributed in Uganda, Kenya, Tanzania, Rwanda and Burundi (Bentley *et al.*, 2013a).

In 2011, the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) commissioned the making of the 10-video “Fighting Striga” series, based on the centre’s long-term, participatory research on this parasitic weed. Then ICRISAT

distributed 50,000 copies of the compilation DVD from Mali through to East and Southern Africa. These were so well received that ICRISAT released another 10,000 copies in Mali alone. ICRISAT was able to keep records on all copies it distributed in Mali, and made a serious effort to track distribution and screenings by its 300 partners (who were occasionally better at showing the videos than at writing down where and when the videos were seen). Many other organisations also duplicated and distributed the Striga video DVDs. These are among others SDC-Benin, DEDRAS-NGO, Benin and NASFAM, Malawi. These Striga videos were translated into 21 (mostly African) languages (Van Mele *et al.*, 2016).

In Bangladesh, in 2012, the International Maize and Wheat Improvement Center (CIMMYT) collaborated on making the “Grow more, earn more” video about conservation tillage machinery, and distributed it with an NGO partner, Agricultural Advisory Services (AAS). AAS showed the video in 332 open-air village screenings to over 85,000 farmers; and distributed the DVD to 1,250 volunteers, about 80% of whom showed the video to other farmers (often to many hundreds each—Van Mele *et al.* 2016). CGIAR centres need to show that their research has been widely extended, and video helps them to do this. National extension programmes may later follow their lead.

The 2015 Access Agriculture online survey, based on responses from 953 people from 102 countries, found that at least 750,000 farmers viewed the videos in meetings, and about 42 million more viewers were reached through television or radio programmes. Three international research institutes and nine radio and TV stations each reached over 10,000 farmers with the videos. A national TV station will only broadcast video if the quality is outstanding.

Yet, getting videos to the farmers is one issue. How they use them and what they learn from them is another. This is the subject of Chapter 4.



4

Experiences in learning (and more) from training videos

Farmers need to be presented with underlying scientific principles, rather than ready-made technologies.

(Paul Van Mele, 2009)

My greatest joy came after finishing the video, and listening to the excited voices of the farmers as they discussed what they were seeing on the screen.

(Musdalafa Lyaga, 2016)

Chapter 2 explained the ZIZO method for developing a training video that can be used in multiple contexts. There, we also mentioned that farmers who have learned through a discovery-based approach, such as a farmer field school, are often selected to help develop farmer training videos that meet Access Agriculture's standards. Discovery-based, or experiential-learning approaches aim to create insights into why things happen the way they do, stimulating farmers to experiment with or to test an idea, to mentally take it apart and put it back together again. In this way, farmers can get a better understanding of a technology, and the underlying scientific principles. Following a discovery-based learning process, farmer-to-farmer training videos can bring alive new ideas that are scientifically valid, honed and tested by real farmers. These videos can share innovations with thousands of communities, without having to set up a farmer field school in every village.

This chapter looks at how the farmer-training videos based on the Access Agriculture model have helped farmers, extensionists, and students to learn. Experience shows that the videos have also stimulated other, unexpected social impacts.

FARMER LEARNING FROM TRAINING VIDEOS

This section gives examples of how Access Agriculture partners and others have used the videos to stimulate farmers to learn. After four years, Access Agriculture is discovering that particular strategies work well, to increase learning from the videos.

Listening and learning from the radio

As mentioned in Chapter 3, radio programmes can help farmers' access to information about how to improve their agricultural practices. Radio stations can also distribute DVDs to farmers and their organised groups.

In Malawi, farmers' groups already existed to listen to agricultural programmes on community radio stations. There, Farm Radio Trust turned these groups into "information hubs". These hubs received DVDs so that when they met, they could watch and discuss the content together. Radio stations also promote the videos, telling where to get DVDs, and how to share the videos with others. One of the lead farmers facilitating the Chipwatu Listener Club in Malawi,

Matilda Gwetsa, explained: “Videos have a long-lasting impact in my mind because I can hear and see how it is done and thereafter try it on my own” (Chinkhokwe, 2016).

Farmers may contact the radio station itself to get more information. In a 2014 blogpost, Jeff Bentley explains how a radio programmer in Mali, Gustave Dakouo, had used videos on combating the parasitic weed, Striga, in his programmes in 2012. He received copies of the “Fighting Striga” video series, which had been translated into several local languages. Gustave played the soundtrack of the videos at the appropriate time of year so that farmers could immediately put the advice into practice. Farmers started calling into the station to get more information. Gustave teamed up with a local agricultural expert, Pierre Théra, who could answer farmers’ questions broadcasted live, as they called into the station (Bentley, 2014).

In Benin, radio stations have played the “Rice Advice” videos during slots normally devoted to music. The programmers’ experience was that their listeners could easily understand that it was video playing instead of a soundtrack only, so came to the station to request copies (Okry et al., 2014).

Watching videos several times to better understand and retain content

Farmers like watching training videos several times, in order to learn the details. Video lends itself to repeated viewing, to pick up all the information, which is important if there is no facilitator to answer questions, or if the local language version of the video is not available (Bede, 2016). Leaving a DVD with farmers allows them to watch the videos several times, and to learn more.

For example, in Bangladesh, some of the tea stalls that received farmer-training videos hosted by Access Agriculture showed them up to 30 times. Each time someone who had not seen the videos dropped in, the other farmers insisted on viewing it again. A video about agricultural machinery was mainly intended to interest farmers in mechanisation, not to teach them how to use the equipment—but

the groups were so interested that many of them watched the video over and over again, gleaning every detail they could from it (Bentley et al., 2013b). This also shows that video-viewing can provide grounds for intensive social interaction and learning after the viewing sessions (Bede, 2016; Karubanga, forthcoming).

The Agoro Vegetable Producers’ Association in northern Uganda received five DVDs in their own language (Luo) and immediately appreciated their value. The group of 25 women and men began adding extra meetings, so they could watch each of the videos several times. The Association members often buy gasoline for a neighbour, so he can run his generator and play the DVDs on his TV set (Bentley, 2016).

Timing it right and combining video with other activities to enhance learning

Gustave, the Malian station manager mentioned above, realised that playing a video soundtrack at the right time of the year makes it easier for farmers to try out the new ideas immediately, when they are still fresh in farmers’ memory. Others working on community screenings (e.g. Nyirenda, 2016; Tchaou, 2016 and Udedi, 2016) noticed that while farmers enjoyed community screenings of videos, they would forget details if the screenings took place during the wrong season.



Many farmers have their own mobile... and many want to have their own copies of farmer-training videos.

Following a discovery-based learning process, farmer-to-farmer training videos can bring alive new ideas that are scientifically valid, honed and tested by real farmers.

In Uganda, PhD student Gabriel Karubanga found that rice farmers learn more if videos are shown at the right time of day (Karubanga *et al.*, 2016). At the beginning of his study, the community watched training videos in the farmers' association hall on Friday evenings. For some people, this was a good time, because they could socialise afterwards. For others, however, it was too late; and if they lived far away, they would have to leave immediately after the viewing to hurry back home. Because it was so late at night, few women could attend. By showing the videos at night, people also saw it more as entertainment and less as a learning experience.

When the videos screenings were moved to the daytime, the audience became more inclusive – and, more discussion and learning activities could take place after the screenings. As one female farmer observed, *"(l)earning through videos does not occur while in the video hall, but occurs outside when farmers can discuss, reflect and share experiences to practise what is being screened"* (Karubanga, 2016). Demonstration sites were set up, and farmers could experiment with the ideas from the videos. The villagers also translated the key messages from the videos into song and drama in their local languages, Rukiga and Runyankole. When farmers could watch the videos as an organised group, followed by formal activities that included experimentation, they understood the video messages better, could retain them and also share the messages with others (Karubanga, 2016; Karubanga *et al.*, 2016).

In Benin, Souradjou (2015) shows that social learning is more intensive when the audience includes members of different farmer associations. He recommends forming video viewing groups with farmers of diverse backgrounds.

Reflecting on whether videos can “stand alone” in farmer learning

During the 2015 Access Agriculture conference, a debate around facilitation came up several times: can video stand alone, or must there always be an agricultural expert on hand to facilitate, explain and answer questions?

Clearly, a video is not a substitute for a national extension programme, and a good discussion about a video facilitated by an agricultural expert enhances the learning process. Nevertheless, different studies show that farmers can learn and experiment on their own after watching a farmer-training video. Watching a video many times, in a supportive group (per the example above), can help to make up for the lack of a paid facilitator. However, the video must be well structured and it must explain the underlying scientific principles. According to Van Mele (2009: 211) when researching the use of video in Bangladesh: *"the more these principles resonated with what farmers already knew and did, the more video became useful as a stand-alone method. Facilitation increased the level of experimentation with sustainable technologies, but was not a prerequisite."*

From Malawi, Vinjeru Nyirenda discovered that farmers preferred getting information from the “Fighting Striga” videos than from lead farmers in their community. They



One of the videos on drip irrigation for tomato, produced in Burkina Faso, quickly traveled the world, being translated in over 30 languages from across Africa, Asia and Latin America.



A video platform with a rich diversity of training videos caters to the diverse needs of rural people.

found the videos' instructions to be clear and easy to follow. The farmers started practising the methods they had learned from the videos on their own (Nyirenda, 2016). A similar finding came from a study by University of Parakou (Benin) students Bio Ganni Kirabe Allou and Mori Gouroubera, about a group of women tofuumakers. The women had become frustrated by what they called "second-hand" training from community leaders. The women wondered if the leader was giving them the full picture of what they needed to know, and if the information was even accurate. In the end, the women preferred receiving a training video on tofuumaking rather than taking a course from a trainer they mistrusted (Allou and Gouroubera, 2016).

For an earlier study in Benin, Bentley *et al.* (2014a) returned to farmers from 19 villages where some rice videos had been screened five years previously by an NGO with much experience showing videos. The rice videos were shown together with videos on important social themes. The NGO staff however had little agricultural expertise and was often unable to answer the farmers' questions about rice. Even so, five years later, the farmers still remembered many key ideas from the rice videos. In most of the villages, some farmers experimented with rice farming or with new technologies they saw in the videos. Some of the villagers also visited extension agencies to get rice

seed, and occasionally to seek more information. The study, entitled "Videos that speak for themselves", concluded that farmers can learn something from agricultural training videos, even those shown by organisations with little previous agricultural experience.

These studies show that farmers can learn more from a good video than from an uninformed or mistrusted person, who can actually turn the farmers off. Confident farmers – even foreign ones – explaining practical innovations on a video sometimes earn more trust than a local person who is unsure of the topic.

USING VIDEO FOR AGRICULTURAL EXTENSION

Public extension services have a long history in agriculture. Many developing countries once had an average of one government extension agent per 300 farmers. In some countries (e.g. China and Vietnam) this is still the case. However, in most countries today, extension services reach few farmers. On average, there is one extensionist for every 1500–3000 farmers (Pye-Smith, 2012). In India, extension services reach 6.8% of farmers (GFRAS, 2012). In Africa the figures widely vary. In Uganda, one extension worker serves about 2,400 farmers (World Bank, 2012) while in



Well-made videos allow farmers to learn from their peers without external facilitation.

Benin one extension worker serves about 500 farmers (MAEP, 2014). Moreover, women make up just 15% of the world's total extension staff, according to GFRAS (2012). On average, women make up almost half (about 43%) of the agricultural labour force in developing countries, and even more (about 67%) form the world's livestock keepers – yet only 5% of these women farmers benefit from extension services (*Ibid*).

Supporting the process of facilitation with video

Videos can help extension to reach more farmers, especially women. Videos can pack many ideas into 10 to 15 minutes, explain issues clearly, and can condense what happens over a long stretch of time (for example a growing season) into a few minutes. Videos also allow farmers to learn from their peers in other places and on any topic, from agriculture to nutrition or health). Videos screened in villages in public also allow more women to attend (along with youth, minorities and other vulnerable groups). In Benin, for example, researchers found that *“Public video screenings helped to overcome participant selection bias through local power structures and gave an equal chance to women and men to learn”* (Zossou et al., 2012: 441).

Agricultural videos are already used by many organisations for their agricultural extension work. Extension agents can use video as support material while facilitating learning sessions with farmers. One

extension agent in Benin who uses the “Rice Advice” videos in his work explained that: *“(i)t is now easy, with these videos, to talk about rice cultivation to farmers, even to the most experienced ones. They welcome me when I visit them and I now feel more appreciated, likely because now I am less theoretical. I can confidently repeat what I have seen in the video in their field”* (Okry et al., 2014: 19). In Orom, Uganda, extension agent Irene Ayoo watched farmer training videos on chilli and sesame growing three times. She says this helped her become a better extensionist to the 300 farmers she serves. Now when they ask her questions, she is prepared with the answers (Bentley, 2016).

Another study in Benin shows that extension agents who watched training videos and had copies to show to communities were more confident working with the farmers on these themes. While farmers who had watched the videos gained confidence to ask questions to extension agents, extension agents who watched the videos better understood the farmers’ perspectives (Okry et al., 2014).

Research in 28 villages in Bangladesh compared villages that had seen videos on rice seed with four that had not. The screenings were facilitated, usually by an agronomist who could answer the audience’s questions and lead a discussion. The women who watched the videos experimented more, adopted more innovations, and found ways to sell seed and to bargain for better prices. These women also reduced their seed rate by almost half (lowering their production costs). The seed they produced was brighter, healthier, and easier to sell. At the same time, 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 et al., 2010).

Mainstreaming use of video into extension systems

Agricultural training videos offer government extension programmes an opportunity to reach

more farmers, while strengthening national systems. However, this is not an obvious conclusion to everyone, as can be shown by the following example.

In 2002, Paul Van Mele and colleagues made four rice seed videos in Bangladesh. The Bangladeshi videos were later translated into many African languages. This formative experience later led to the production of more farmer-to-farmer training videos, and ultimately to the establishment of Access Agriculture. Ahmad Salahuddin (from the International Rice Research Institute (IRRI) in Bangladesh) was involved in this first experience of producing the rice seed videos. Much to his frustration, the videos were not integrated into the Bangladeshi government's extension system in spite of many efforts. Salahuddin writes that in 2002 the government extension system could have shared the videos widely with farmers; for example, a policy could have been made to link all innovations coming from the research system to farmer training videos with fact sheets. Videos could have been picked up by national media. There could also have been initiatives to translate training videos from Africa into Bengali. (Salahuddin, 2016). Now 14 years later, the government's main audio-visual agency (AIS) and Bangladesh's largest agricultural TV show are eager to collaborate with Access Agriculture which now has a portfolio of high-quality videos for farmers, beyond the original four. A critical mass of videos may be needed before expecting a government extension programme to take them on board.

STIMULATING CHANGE THROUGH TRAINING VIDEOS

While it is difficult to measure how much farmers learn from watching videos, learning is clearly taking place. Yet, a training video is only as good as the productive changes that farmers make after watching it. Behaviour can change in two ways: *technically* (changes in farming practices) and *socially* (changes in how people organise themselves, either within the community or in relations with outsiders). This section includes examples of both types of changes.

Learning and technical change

In Uganda, farmers watching the "Rice Advice" training videos (without facilitation) learned to select seed, to make a seedbed and fertilise it, to dry rice, to prepare land twice, to plant rice and weed it. These innovations helped farmers to improve yields so much that the rice millers began showing the videos to farmers, so that farmers would have more rice to bring to the mill (Bentley *et al.*, 2013a). Another example comes from Mali where farmers watched the "Fighting Striga" video series and started making compost, intercropping grains with legumes and micro-dosing (adding small amounts of fertiliser near each plant) (Bentley *et al.*, 2014b). In a separate study, Vinjeru Nyirenda (2016) found that farmers in Malawi learned to control Striga by watching the Chichewa versions of these videos.

The videos are designed to stimulate farmers' creativity. After watching rice videos in Benin, people in 14 of the 19 villages experimented with ideas from the videos, such as rice parboiling, or threshing rice on tarps (to keep out stones and impurities). Many of these villagers also made social changes, e.g. contacting their extension agents to ask for rice seed, or for advice (Bentley *et al.*, 2014a).

It is easier for people to experiment when they learn the principles underlying the innovation. For example, one video not only showed the equipment and steps needed to parboil rice, but also explained that the rice is parboiled by the steam, and turns mushy if it touches the boiling water. This underlying principle allowed women's groups in Benin to experiment with less expensive equipment for parboiling (Zossou *et al.*, 2012).

Learning and social change

Villagers are as creative in their social relations as they are with their farm technology, and sometimes the videos spark unexpected changes that go beyond technical adaptations of farming practices. As mentioned above, the villagers in Benin often sought out their extension agents after seeing videos on rice. In Mali, the people of the village of Kouna liked



Quality training videos instill a sense of pride in farming and can inspire farmers to collaborate in new ways.

the video “Fighting Striga” enough to form a village committee to make sure that everyone watched the videos, in popular screenings in the village centre. Another video “Let’s Talk Money” explains simple counting of costs and benefits, so that people could figure out whether they were making money when they changed a farming practice. The young women in two villages (Orgnon and Sirakèlé) said that the video helped them to improve their accounting, in their organised groups (Bentley *et al.*, 2014b).

A group of women in the village of Daga, Mali, were further inspired by what they learned from the Striga videos. While the women could all easily identify the parasitic weed by its flashy, purple flowers, they only appreciated how much damage Striga caused in cereal crops when watching the videos. From the videos, the women learned that by uprooting Striga during the flowering stage, the weed will be eliminated before it sets seed. One of the videos showed a whole community going from field to field, uprooting the weed to get rid of it. The women in Daga picked up on this idea and organised themselves to earn money, by uprooting Striga on time for other farmers (Guindo, 2016).

Above, we mentioned how radio programmes promoted the formation of farmer information centres

in Malawi (Chinkhokwe, 2016). From Parakou University in Benin, graduate students Fayçal and Adenidji (2016) tell how rice farmers formed viewing groups around a farmer with the necessary equipment, all chipping in to buy the fuel for the generator, in order to watch rice training DVDs. The students observed the formation of first men’s groups, then women’s and youth video clubs. The women had heard about the videos from their husbands, so they managed to acquire the necessary DVD player, television set and generator to also watch the videos. Youth video clubs were also introduced in some districts, based at the farmers’ organisations. Zossou *et al.* (2010) found that women in Benin were actually motivated to start groups to parboil rice, after watching a video on the subject.

USING AGRICULTURAL TRAINING VIDEOS IN THE CLASSROOM

Although videos hosted on the Access Agriculture platform are all intended to train farmers, it was a pleasant surprise to learn that they were also being used in universities to teach students about agriculture and the world of smallholder farming. Simon Mutonga, lecturer at Egerton University in Kenya, has taken the Access Agriculture video production course, and uses the videos in his teaching. In his communication

The students observed the formation of first men's groups, then women's and youth video clubs.

technology courses, he teaches students to make their own videos and fact sheets. The students return to the communities and show their videos, and get comments from the farmers. This method encourages students to spend time with farmers and get feedback from them. Farmers ask: *"Do you have a video on dairy cattle feeding ... raising chickens ... making bee hives?"* Mutonga writes that *"the farmers are very happy to see that universities are interested in using them (farmers) as teachers of other farmers (and of students)"*, and they do not expect payment for their participation.

Mutonga has downloaded about 40 videos from the Access Agriculture platform to show to students in his class, which arouse the students' interest in learning more. Professor Mutonga sets students to translating videos into their own languages, which they enjoy. Video production is now a part of Egerton University's curricula for diploma, bachelor's and master's levels. There are challenges in this, such as lack of funds, time limitations and problems with internet connectivity. But Mutonga finds ways around these challenges and believes that video production is a very useful tool for students to learn, and might even help them get future jobs (Mutonga, 2016).

Léonce Sessou, head of communications at Songhai Centre in Benin, tells another inspiring story about using video for education. The centre promotes a holistic system of sustainable agriculture, recycled waste and renewable energy through an education programme that seeks to attract more young people to agriculture. Songhai has grown over the years to become a regional initiative in 15 countries. Practical work at the Songhai Centre's 24-hectare farm makes up 85% of the training, but video sessions are an important part of the programme. Teachers there have noticed that *"videos are entertaining and capture the attention of the student (farmers)."* Some members of staff were trained by Access Agriculture, and produce

videos for the Centre. These along with other videos from the Access Agriculture platform and elsewhere are downloaded and shown to students twice a week, to fit into the curricula – which last from three to 18 months. Trainers prepare for the sessions with students by watching the videos beforehand. After watching the video, the group has a discussion and the trainer responds to students' questions. Sessou concludes that videos help the youth of today, who are part of the "digital generation", to see the fun and also the profitable sides of farming (Sessou, 2016).

Learning by filming

Simon Mutonga's students in Kenya found that making videos was a great way to learn, but Alcide Agbangla, video producer for the Songhai Centre, has taken his learning from farmers and other experts very much to heart. He started as a journalist, but found that producing videos and conducting thorough research *"are turning me into a small-scale farmer, an agricultural entrepreneur"*. Because of all he has learned through producing farmer-training videos for the Songhai Centre, he now dreams of one day starting his own farm - and has already started to raise rabbits (Agbangla, 2016).



5

Key lessons and the future of farmer-training videos

In 2015, Access Agriculture celebrated its first three years of existence. Even so, many of its staff and partners have been working with agricultural training videos for over ten years. Looking back on these experiences brings forward important insights on how best to make and use videos to stimulate learning and positive change.

KEY LESSONS LEARNED

Producing farmer-to-farmer training videos

When choosing a topic for a training video, many heads think better than one. Frequent consultations with farmers help to get the tone and angle right for the key audience.

Writing a script is the best way to craft a clear and scientifically accurate message. It is much easier to translate a video if it has a script. Base the script on a fact sheet in the snowman outline (what is the problem – why will the proposed solution work – and how to use it). The “why” section is the most critical for farmers to be able to experiment and come up with their own solutions.

A good script requires many rewrites and refinements before it will be good enough.

Making a good quality video requires attention to detail at every step of the way (choosing a topic,

writing the fact sheet and the script, camera work and editing, as well as collecting feedback from farmers on the first version of the video).

From the beginning, build trust with farmers, their community, organisations and government stakeholders involved in the video. Showing them an example of farmer training videos will help to stimulate this interest. Good communication from the start is essential to be sure that the farmers and other stakeholders have realistic expectations before producing a video with them.

Power issues among stakeholders need to be handled tactfully. Organise the interview questions and other shots you will need ahead of time. Explain to local leaders that the final interview clips are chosen based on the best flow of information for learning. People who helped with the video can be mentioned in the end credits, even if they do not appear on camera. Try to avoid filming interviews that you do not need.

Making video accessible to farmers

Good translations into local languages ensure that more farmers understand the message without external facilitation. Accurate script translations and voice-overs require time and effort, but cost less than producing new videos.

Modern technologies (mobile phones, solar panels, compact projectors, etc.) are now reaching

remote regions. Public screenings, radio and TV broadcasts can serve groups that are not visited by extensionists.

Video reaches more people if a proper screening venue and time is chosen. A video shown at dusk on the village green attracts everyone within earshot: women and men, youth and elders, and even the children. Consider the best timing for each context.

A single DVD can hold several videos, in various languages. DVDs cost about a Euro to print and can be shared widely (e.g. advertised over the radio or through NGOs, extensionists or the private sector). Videos in the hands of farmers and grassroots organisations allow farmers to take their own initiative to learn.

Learning from video

Farmers often like seeing smallholders from other places telling how they solve problems. If video is well planned and properly filmed to show useful information, the audience accepts translated videos from other countries. The farmer audience pays little attention to how the people in the video are dressed, or their skin colour, but quickly notices whether the land is hilly or flat, if the soil is hard or sandy, and the tools used by the foreign farmers. When the natural environment shown on the screen is much different from the one at hand, the farmer



Making a video for farmers is a two-way learning street.

audience may need more encouragement to try the innovations from the video.

Offer different options, like a menu of technologies. Start with the techniques most familiar to farmers before moving on to more novel innovations. The video must always explain scientific principles (why something works) so that people know how to experiment with the new idea.

Farmers can learn a lot from a well-made video featuring other farmers who confidently explain a practical innovation. A good video with clear explanations is more effective than a poorly facilitated training. Videos also help extensionists learn more about the new technology and how farmers perceive it. Videos can reach people who may be missed by extension services (such as women and youth). Video can be combined with facilitated discussions, demonstrations and other activities to increase learning and enhance experimentation.

Local language videos left in the hands of the community allow rural people to learn at their own pace. When the video is not available in the local language, it can be screened twice in another language, or facilitators can simultaneously translate it, or discuss it with the audience. When a video is properly filmed to illustrate key concepts, the images alone convey much information.

With facilitated screening it is best to show the videos one or two at a time, with ample discussion led by a knowledgeable facilitator, at the right time of the day and the appropriate season, so that farmers can immediately try out the new ideas. However, it doesn't always work that way. Sometimes a community sits down and watches 10 videos at once, with no facilitation. Even so, they learn something and usually remember the key points so they can be applied months later.

Being able to repeat video viewings helps farmers retain ideas.

Farmer-training videos are now being used to teach students (at higher education and technical training centres) about agriculture. These videos also help to bridge the gap between students and farmers.



To make quality videos, one needs people with different skills, but they all must have patience...

People who make a video learn a lot about the topic they film. Students can make videos with farmers and translate existing videos into the students' own language. Video is an appealing way to attract more youth into agriculture, on campus and in remote villages.

Learning practical information inspires people to experiment with new behaviour: whether technical or social. After watching farmer-training videos, some people will try a new crop, find a way to control a nagging weed, or grow more rice, for example. But people may also form a new work group to make money, or they keep better track of the money they are already earning. Some villagers may organise themselves into groups to watch and analyse the videos together.

THE FUTURE OF FARMER-TRAINING VIDEOS

Advances in electronic technology make videos easier to share. For example, Access Agriculture has modified its platform to make all the hosted videos freely downloadable in new formats (like 3gp) for mobile phone viewing. 3gp files are much smaller than conventional ones, and dozens of videos can be easily copied onto a memory card, to play videos

on ordinary cell phones. Also, lighter, more compact and solar-powered equipment that can house large numbers of videos make screenings easier in remote areas.

Different stakeholders play new roles in video distribution. Access Agriculture was delighted to find out how frequently the videos it hosts are being used in universities and other schools. When these digital-age students graduate, they will no doubt find creative ways to use videos in teaching and extension. As today's students become tomorrow's researchers, they may examine the questions that have been raised in this book, and come up with many new ones.

The private sector has already proven to be receptive to videos. For example, input dealers and rice millers are willing to show videos or distribute DVDs, as the information helps farmers produce more, earn more, and to become better customers. Small town DJs who make a few coins copying movies onto farmers' phones can easily distribute training videos. Access Agriculture and partners, especially NGOs and CGIAR centres, have much experience compiling DVDs with a set of videos in several languages. This skill in creating video anthologies can be easily transferred to the private

sector, as small businesses in southern countries can sell entertaining DVDs with learning DVDs at low prices, to anyone who wants them.

Organisations interested in using video in their rural/ agricultural development projects can integrate translations of videos or new titles into their proposals.

National systems are slower to adopt innovations in extension, but are also more loyal to a new method, once it has been accepted. An innovation may have to be used for many years by NGOs and international donor-funded projects before a national extension system accepts it. Ironically, the international sector often gives up on an idea about the time that national systems institutionalise

it. Farmer field schools are the latest example of this. However, the wide application of audio-visuals (in entertainment, education, news, social media, advertising and education) suggests that video is here to stay. National systems will accept farmer-training videos once there is more experience with them, more titles, and they are available in more national languages. The exploding supply of digital, audio-visual information on the internet, and on cell phones is an opportunity too good to miss. Information for farmers needs to be part of this revolution, and it is worthy of the best efforts of donors, national extension services, NGOs and the private sector.



Well-researched, well-made videos will continue to inspire farmers across borders for decades.

REFERENCES CITED

- Agbangla, Alcide (2016). *Becoming a journalist farmer*, Chapter 21. In J. Bentley, E. Boa, & M. Salm (Eds.), *A Passion for Video. 25 stories about making, translating, sharing and using videos on farmer innovation*. Access Agriculture, Nairobi and CTA, Wageningen, 56 pp.
- Access Agriculture Website. <http://www.accessagriculture.org/>
- Allou, Bio Ganni Kirabe and Mori Gouroubera (2016). *Crazy about the new cheese*, Chapter 20. In J. Bentley, E. Boa, & M. Salm (Eds.), *A Passion for Video. 25 stories about making, translating, sharing and using videos on farmer innovation*. Access Agriculture, Nairobi and CTA, Wageningen, 56 pp.
- Bede, Lauréano E. Beranger (2016). *Analysis of the power of images and languages on farmers learning through training videos in Mono and Couffo departments*. MSc thesis, University of Abomey-Calavi, Abomey Calavi, Benin Republic.
- Bentley, Jeff (2014). *The truth of local language*. Agro-Insight blogpost from 26 October 2014. <https://tinyurl.com/yd3qewpq>
- Bentley, Jeffery (2015). *Salt and Beans*. Agro-insight blogpost from 7 June 2015. <https://tinyurl.com/ybf7cyr2>
- Bentley, Jeff (2016). *The Luo translations: farmer learning videos in northern Uganda*. Agro-Insight. <https://tinyurl.com/y7dmmnu>
- Bentley, J and Boa, E (2013). *The snowman outline: fact sheets by extensionists for farmers*. Development in Practice 23(3), 440-448. <https://tinyurl.com/y84awe25>
- Bentley, Jeffery and Van Mele, Paul (2011). *Sharing ideas between cultures*. International Journal of Agricultural Sustainability, 9(1), 258-263. <https://tinyurl.com/y7a262gw>
- Bentley, Jeffery, Paul Van Mele and Grace Musimami (2013a). *The Mud on Their Legs – Farmer to Farmer Videos in Uganda*. Agro-Insight. MEAS Case Study #3, July 2013. <https://tinyurl.com/y84hy3ph>
- Bentley, Jeffery, Paul Van Mele and Harun-ar-Rashid (2013b). *The story of a video on mechanical seeders in Bangladesh: If we are convinced, we will buy it*. MEAS Case Study # 6. <https://tinyurl.com/y7go7q6l>
- Bentley, Jeffery, Paul Van Mele, Florent Okry and Espérance Zossou (2014a). *Videos that speak for themselves: when non-extensionists show agricultural videos to large audiences*. Development in Practice Vol. 24 No. 7:921-929. <https://tinyurl.com/y7kxwnc>
- Bentley, Jeffery, Paul Van Mele, Sidi Touré and Tom van Mourik (2014b). *Fighting Striga and improving soil fertility with videos in Mali*. Agro-Insight. <https://tinyurl.com/ycz2nfs9>
- Bentley, Jeffery, Flora Chadare, Mahesh Chander (2015a). *On-line survey of Access Agriculture: Video-mediated farmer-to-farmer learning for sustainable agriculture*. Agro-Insight.
- Bentley, J, A Chowdhury and S David (2015b). *Videos for Agricultural Extension*. Note 6. GFRAS Good Practice Notes for Extension and Advisory Services. GFRAS: Lindau, Switzerland. <https://tinyurl.com/y9bow2o5>
- Bentley, Jeff, Boa, Eric and Salm, Mundie (2016). *A Passion for Video. 25 stories about making, translating, sharing and using videos on farmer innovation*. Access Agriculture, Nairobi and CTA, Wageningen, 56 pp. <https://tinyurl.com/ydxkahc3>
- Chabvuta, Tamanda (2016). *It will take time before Eletina watches her video*, Chapter 11. In J. Bentley, E. Boa, & M. Salm (Eds.), *A Passion for Video. 25 stories about making, translating, sharing and using videos on farmer innovation*. Access Agriculture, Nairobi and CTA, Wageningen, 56 pp.
- Chinkhokwe, Philip (2016). *Videos on the radio*, Chapter 23. In J. Bentley, E. Boa, & M. Salm (Eds.), *A Passion for Video. 25 stories about making, translating, sharing and using videos on farmer innovation*. Access Agriculture, Nairobi and CTA, Wageningen, 56 pp.
- Chepyegon, Francis, Josephine Rodgers, Marcella Vrolijk and Paul Van Mele (2015). *A guide to producing farmer-to-farmer training videos*. Access Agriculture.
- Chowdhury, AH, Hambly Odame, H and Hauser M (2010). *With or without a script? Comparing two styles of participatory video on enhancing local seed innovation system in Bangladesh*. Journal of Agricultural Education and Extension 16(4): 355-371.

- Dembélé, Gilbert (2016). *You want to film me? Give me money!* Chapter 16. In J. Bentley, E. Boa, & M. Salm (Eds.), *A Passion for Video. 25 stories about making, translating, sharing and using videos on farmer innovation*. Access Agriculture, Nairobi and CTA, Wageningen, 56 pp.
- Digital Green Website. <http://www.digitalgreen.org/>
- FAO (2016). *Farmer Field School approach*. FAO website, accessed 06/05/2016. <https://tinyurl.com/yc8rx46z>
- Fayçal, Souradjou (2015). *Effects of organisational factors on videos' messages learning and diffusion in agriculture: Case study of the soya processing video in Benin*. MSc thesis, University of Parakou, Parakou, Benin Republic.
- Fayçal, Souradjou and Adenidji, Charlot Eriola Marius (2016). *Farmers get organised to watch videos*, Chapter 22. In J. Bentley, E. Boa, & M. Salm (Eds.), *A Passion for Video. 25 stories about making, translating, sharing and using videos on farmer innovation*. Access Agriculture, Nairobi and CTA, Wageningen, 56 pp.
- GFRAS (2012). *Fact Sheet on Extension Services*. Position Paper: June 2012. Global Forum for Rural Advisory Services. <https://tinyurl.com/czv4cvf>
- Guindo, Samuel (2016). *Earning money from weeds*, Chapter 17. In J. Bentley, E. Boa, & M. Salm (Eds.), *A Passion for Video. 25 stories about making, translating, sharing and using videos on farmer innovation*. Access Agriculture, Nairobi and CTA, Wageningen, 56 pp.
- Hailu, Wonwosen (2015). Presentation and interview during the AA week on *The approach of Digital Green*.
- Karubanga Gabriel, Haroon Sseguya, Paul Kibwika and Florent Okry (2016). *Access and Use of Video-mediated Agricultural Information: Lessons from the Case of Sasakawa Global 2000 Rice Videos in Uganda*. African Journal of Rural Development (in press).
- Krupnik, Timothy J. (2016). *No laughing matter: videos that blend humour, drama and machinery in Bangladesh*, Chapter 12. In J. Bentley, E. Boa, & M. Salm (Eds.), *A Passion for Video. 25 stories about making, translating, sharing and using videos on farmer innovation*. Access Agriculture, Nairobi and CTA, Wageningen, 56 pp.
- Lie, R and Mandler, A (2009). *Video in development: Filming for rural change*. Wageningen, The Netherlands and Rome, Italy: CTA and FAO. <https://tinyurl.com/ybpbz2zo9>
- Lunch, Nick and Lunch, Chris (2006). *Insights into Participatory Video – A handbook for the field*. Insightshare. UK/France. <https://tinyurl.com/ybbufues>
- MAEP (2014). *Normes de travail des cadres et agents de terrain pour la mise en oeuvre du conseil agricole*. Bénin Ministère de l'Agriculture de l'Élevage et de la Pêche (MAEP). Cotonou 23p
- Maiga, Mark (2016). *Finding the words*, Chapter 6. In J. Bentley, E. Boa, & M. Salm (Eds.), *A Passion for Video. 25 stories about making, translating, sharing and using videos on farmer innovation*. Access Agriculture, Nairobi and CTA, Wageningen, 56 pp.
- Mutonga, Simon N. (2016). *When students make farmer training videos*, Chapter 10. In J. Bentley, E. Boa, & M. Salm (Eds.), *A Passion for Video. 25 stories about making, translating, sharing and using videos on farmer innovation*. Access Agriculture, Nairobi and CTA, Wageningen, 56 pp.
- Nyirenda, Vinjeru (2016) *Learning more from videos than from lead farmers*, Chapter 13. In J. Bentley, E. Boa, & M. Salm (Eds.), *A Passion for Video. 25 stories about making, translating, sharing and using videos on farmer innovation*. Access Agriculture, Nairobi and CTA, Wageningen, 56 pp.
- Nalunga, Jane (2015). Presentation during the Access Agriculture conference. November 2015, Nairobi, Kenya.
- Okry, Florent, Paul Van Mele and Felix Houinsou (2014). *Forging New Partnerships: Lessons from the Dissemination of Agricultural Training Videos in Benin*. Journal of Agricultural Education and Extension 1(21). <https://tinyurl.com/yaltxheg>
- Pye-Smith, Charlie (2012). *Agricultural extension A time for change: Linking knowledge to policy and action for food and livelihoods*. CTA, Wageningen. <https://tinyurl.com/y7pvps2l>
- Salahuddin, Ahmad (2016). *Giving birth is the easy part*, Chapter 18. In J. Bentley, E. Boa, & M. Salm (Eds.), *A Passion for Video. 25 stories about making, translating, sharing and using videos on farmer innovation*. Access Agriculture, Nairobi and CTA, Wageningen, 56 pp.
- Sessou, Léonce (2016). *Making farming sexy*, Chapter 19. In J. Bentley, E. Boa, & M. Salm (Eds.), *A Passion for Video. 25 stories about making, translating, sharing and using videos on farmer innovation*. Access Agriculture, Nairobi and CTA, Wageningen, 56 pp.

- Tabet, Laura (2016). *Ready, set, bureaucracy! Kick-starting farmer training videos in Egypt*, Chapter 5. In J. Bentley, E. Boa, & M. Salm (Eds.), *A Passion for Video. 25 stories about making, translating, sharing and using videos on farmer innovation*. Access Agriculture, Nairobi and CTA, Wageningen, 56 pp.
- Tabet, Laura (2015). Presentation during the Access Agriculture conference. November 2015, Nairobi, Kenya.
- Tchaou, Donald (2016). *Showing videos without electricity*, Chapter 14. In J. Bentley, E. Boa, & M. Salm (Eds.), *A Passion for Video. 25 stories about making, translating, sharing and using videos on farmer innovation*. Access Agriculture, Nairobi and CTA, Wageningen, 56 pp.
- Udedi, Ronald Kondwani (2016). *Deejaying on the farm*, Chapter 15. In J. Bentley, E. Boa, & M. Salm (Eds.), *A Passion for Video. 25 stories about making, translating, sharing and using videos on farmer innovation*. Access Agriculture, Nairobi and CTA, Wageningen, 56 pp.
- Van Mele, Paul (2009). *Strengthening Rural Extension*. In: I. Scoones and J. Thompson (eds) *Farmer First Revisited: Innovation for Agricultural Research and Development*. London: Practical Action Publications, pp. 207-212. <https://tinyurl.com/yalhogns>
- Van Mele, P (2011). *Video-mediated Farmer-to-Farmer learning for sustainable agriculture: A scoping study for SDC, SAI Platform and GFRAS*. Agro-Insight. Ghent, Belgium.
- Van Mele, Paul (2014a). *A hard write*. Agro-insight blogpost from 9 November 2014. <http://www.agroinsight.com/blog/?p=545>
- Van Mele, Paul (2014b). *The rules and the players*. Agro-insight Blogpost from 12 March 2014. <https://tinyurl.com/yc75zru8>
- Van Mele, Paul (2015). *Struggling with tubers*. Agro-insight blogpost from 22 February 2015. <https://tinyurl.com/yicsa2pl9>
- Van Mele, Paul, Wanvoeke, Jonas and Zossou, Espérance (2010) *Enhancing rural learning, linkages and institutions: the rice videos in Africa*. *Development in Practice* 20(3), 414-421.
- Van Mele, Paul, Jeffery W. Bentley, Md. Harun-ar-Rashid, Florent Okry and Tom van Mourik (2016). *Letting Information Flow: Distributing Farmer Training Videos through Existing Networks*. *Indian Journal of Ecology* 43 (Special issue 1): 545-551. <https://tinyurl.com/y7w2yhzu>
- Vuol, Raymond (2016). *The video tricycle*, Chapter 8. In J. Bentley, E. Boa, & M. Salm (Eds.), *A Passion for Video. 25 stories about making, translating, sharing and using videos on farmer innovation*. Access Agriculture, Nairobi and CTA, Wageningen, 56 pp.
- World Bank (2012). *Lifelong learning for Farmers: Common Wealth of Learning in action*. Washington DC, World Bank.
- Zossou, Espérance, Paul Van Mele, Simplic D. Vodouhe and Jonas Wanvoeke (2010). *Women groups formed in response to public video screenings on rice processing in Benin*. *International Journal of Agricultural Sustainability* 8(4): 270–277.
- 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. <https://tinyurl.com/ybp33fnr>
- Zoundji, Gérard C., Florent Okry, Simplic D. Vohouhê, and Jeffery W. Bentley (In press). *Distribution of training videos for knowledge development and sharing: Lessons from non-conventional agricultural information dissemination networks in Benin Republic*. *International Journal of Education and Extension*.

ONGOING REFERENCES FOR FURTHER READING

<https://www.accessagriculture.org/publications>

<https://www.accessagriculture.org/university-theses>



www.accessagriculture.org

