

Malawi DJs distribute videos to farmers

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Photo credits

All photos are by Jeff Bentley unless otherwise indicated.

Cover photo

The Matola family watches a farmer learning video on their cell phone in Ulolo, Malawi

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Summary

In 2015, 95 DJs (video dealers) in southern Malawi received three DVDs with multiple farmer learning videos in the English, Chichewa, Yao, and Sena languages. The DJs were encouraged to sell these videos to farmer customers. Many of the DJs have since gone on to other activities, but in September 2016, a team from Access Agriculture was able to find 56 of the DJs, including three or four distributors who were not DJs. Twenty-seven of them had burned new copies of the DVDs and 36 had converted videos so customers could watch them on cell phones. Virtually all of the DJs distributed at least some of the original DVDs they received from Access Agriculture.

Many of the DJs were able to make a little money from the videos. Other DJs distributed them out of a sense of community service, or as a way of attracting and retaining customers. Some of the DJs also shared the videos with other DJs, ensuring that the videos will distribute themselves through the informal network of small town ICT shops.

Some of these DJs are professional entrepreneurs who are on top of their game. Others are not imaginative enough to grasp new opportunities. For at least some of the DJs, distributing farmer learning videos has created a new customer base of older men, farmers interested in learning videos, so the DJ's business is no longer just about entertainment videos for youth. The videos help to build community respect for entrepreneurs offering entertainment and ICT services.

The DJs know more about the customers who got the Access Agriculture videos on DVD than the ones who got videos on cell phones. Many of the farmer customers who got the videos on phone cards are older men who come from far away, on market day, and one thing they do on market day is get new videos. The DJs do not know them as well and do not have their names and numbers. The ones who live near the DJs in the small towns are more likely to be younger, not farmers, and to have electricity and DVD players. Market days are well suited to reach people from wider areas (as with the extension method Going Public, see Bentley et al. 2013). 3gp videos (i.e. formatted for cell phones) are probably best for reaching the most distant customers. Farmers who watched the videos on cell phones reported that the sound and picture quality was good enough to understand the content.

One of the people who distributed videos was an input dealer. People liked the DVDs so much that when they bought vegetable seed some of them would say "Don't you have a video to go along with these?"

The DJs are not agricultural extensionists, but there are so many DJs, and they have fairly good computer skills, that DJs are a viable alternative for distributing farmer learning videos in Africa.

Spot checks of farmers who received videos from the DJs confirm that the farmers really did receive videos from DJs, watched them (usually several times) and usually shared them with friends and family. Even though the farmers received the videos cold, out of the blue, with no facilitation, the farmers' understanding of the content was so good that the farmers creatively adapted the information. Some farmers started growing chilli for the first time after watching the videos. Others responded by controlling Striga, which they had never done before. Some

experimented with rice nurseries, fertilizer and planting rice in lines. Farmers appreciated the logical sequence of the videos and readily grasped that the innovations shared on the videos came from real farmers (“our friends”, as many of the Malawian farmers called these smallholders seen on the screen).

After watching the videos, the farmers conducted excellent experiments, as good as those by farmers who saw the videos with facilitation and other program support. In part this may be because the Malawian farmers were self-selected, inquisitive farmers who actively seek out new information.

1. Introduction

In a 2014 study we learned that the DJs in Malawi distribute movies and music videos to a large rural audience. The DJs are mostly young men who are based in small towns and put videos on people’s cell phones and on DVDs (Bentley et al. 2014, 2016).

Following that scoping study, in 2015 Ronald Udedi distributed three DVDs in English, Chichewa and other Malawian languages to 95 DJs in southern Malawi. The DVD compilations were:

- Rice Advice (11 video modules)
- Fighting Striga (10 video modules)
- Chilli (7 video modules)

These were DVDs compiled from videos that Access Agriculture curates on www.accessagriculture.org. Each DVD has a language menu, where viewers can select a language (e.g. English or Chichewa) and then select which videos they want to watch.

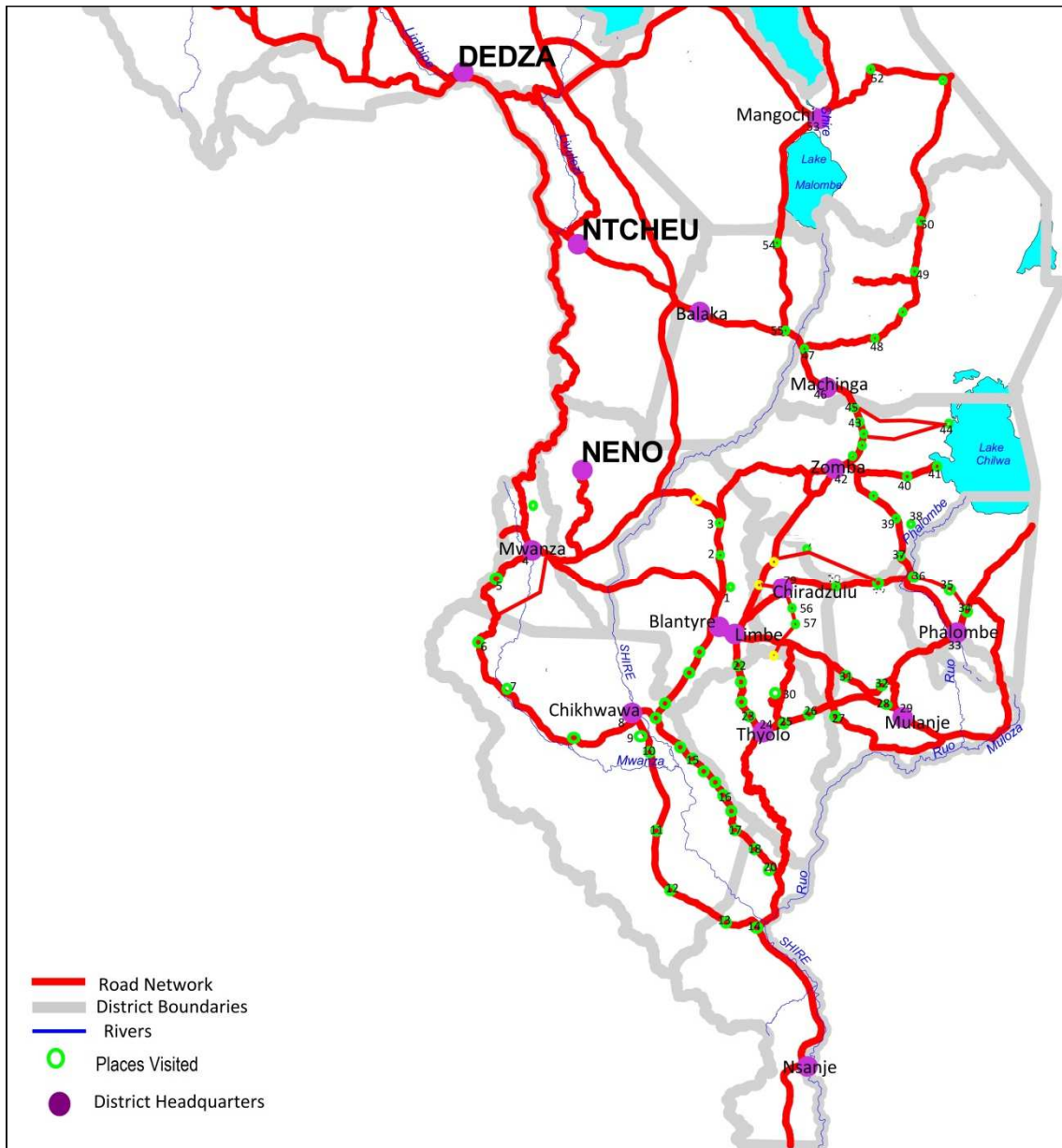
In February 2016, Udedi contacted 70 DJs in a follow up study. They had sold 456 DVDs on Striga (a parasitic weed), 551 on rice and 507 on chilli growing and processing. They also sold 645 sets of videos in 3GP on Striga, 547 on rice and 559 on chilli (Bentley et al. 2016).

In September 2016, Bentley and Udedi visited as many DJs as possible, of those who had received the DVDs, to learn about their experience. This was also the first study where we sought out farmers who had watched the videos distributed by the DJs.

Hypothesis 1. The DJs distributed videos as a way of enhancing their business.

This hypothesis is important because we already knew that the DJs were distributing videos. If they did so out of enlightened self-interest, not hoping to link with a project, but as a way of strengthening their business, then in the future Access Agriculture could contact other entrepreneurs to distribute videos sustainably.

Hypothesis 2. The farmers who received videos from the DJs, without any contact from extension agents, watched the videos, learned valuable information and applied it creatively in their work.



Study area

2. Results

The ICT market in rural Malawi is growing fast, and the young DJs are in an inherently unstable time of life, so there have been many changes since 2014.

James Kodo, adapting to blackouts

James Kodo is a soft-spoken young man who has invested in a generator, so while the other three or four DJs in Lunzu are closed for the blackout, James is open for business, busy swapping computer files, scanning and printing documents. He has so many customers that the room is packed and more people are standing outside, looking in through the open window.

James is unusual. Hardly any of the DJs we will visit have a generator. Many have little or no money to invest even in computer equipment.



Customers look in through the window of James's shop

James Kodo

Video distribution. Sold all the original DVDs and burned 2 more DVDs on request for people. He has the videos on his hard disk. He converted the videos to 3gp and put them on people's memory cards. Since Ronald was here in February, James has distributed more videos on memory cards. He hasn't kept track, but reached many people, over 30.

1. How videos changed the business. It was a benefit to his business, because some people came from the villages asking about the videos. James sold some and gave some away. The people just come and get the AA (Access Agriculture) videos. They don't stay and buy entertainment videos as well. But some people who come to get music videos end up taking the AA videos as well.

2. Other topics customers demand. Tomatoes and onions.

3. Questions from customers. None.

Bentoz (Umali Bento)

In Lirangwe meet Bentoz, one of the DJs that received DVDs from Ronald in 2015. In February, Ronald gave the DJs two Access Agriculture posters, and Bentoz has his prominently displayed, next to the door.

Bentoz

Video distribution. Bentoz has not sold many videos since February, but he puts the videos on memory cards for people, or customers bring in a blank DVD and he burns it. Has given away 18 DVDs and from February to June gave away videos on 36 memory cards and 5 directly on cell phones.

1. How videos changed the business. People come to the shop to get music videos, so Bentoz tells them about the DVD and when they see it they ask for it for free. Bentoz complains that he does not have time to do more with the videos, but says that they have attracted some customers

2. Other topics customers demand. Sometimes people watch the videos and return to ask what other titles Bentoz has, so he tells them he has rice, striga and peppers.

3. Questions from customers. Bentoz gently chides us for not coming more often. He says that people do ask about how to grow that pepper or control striga, and that Ronald and Jeff should open an office in the area and plant demonstration plots.

Geoffrey Mause

Geoffrey Mause

Video distribution. Putting a video on the memory card, costs 30 Kwacha per video, not per DVD. Geoff's burner doesn't work so he can't copy DVDs. Mostly he puts the videos on the

memory card. Geoff distributed all of the original copies of the AA DVDs.

1. How videos changed the business. There was a time when a lot of people came, but now they don't come so much for the old AA videos. There was a time when the agricultural videos were new, and people would come and ask for them, and some of them would get entertainment videos too.

2. Other topics customers demand. How to keep chickens.

3. Questions from customers. A lot of people come to ask questions. Some even come to Geoff's house, but he tells them that he doesn't know the answers either. A lot of people have Striga, but they only realize it when it's dry. Sometimes in the dry season those flowers are not there. The farmers ask how they can control striga when the plants are not in flower.

Mwanza telecentre

Mathews Kabika runs a telecentre and in 2014 he received over 20 DVDs and he took the trouble to go around the village, hand delivering the DVDs to farmers that he thought would be responsive. One of those farmers was Lester Mpinda. See the blog story, "New crops for Mr. Mpinda." <http://www.agroinsight.com/blog/?p=1524>

New crops for Mr. Mpinda

A good video, one that lets farmers tell about their innovations, can spark the viewers' imagination. A video can even convince smallholders to try a new crop.



Lester Mpinda is an enterprising farmer in Mwanza, Malawi. Mpinda has a vegetable garden, known as a *dimba*, which is irrigated with water from a hand-dug well. A *dimba* is hard work, but worth it. Mpinda grows vegetables, and sells them in the market in Mwanza. In 2013, he was able to use his earnings to buy a small, gasoline-powered pump to water his beans, onions and tomatoes. A \$100 pump

is a major investment for a Malawian smallholder, but also a great way to save time and avoid the backbreaking labor of carrying water from the well to the plants during the long, hot dry season.

With the money earned from his productive *dimba*, Mpinda bought a small stand, where his wife sells vegetables in the village.



In June 2015, Ronald Kondwani Udedi left some DVDs with videos at a government telecentre managed by Mathews Kabira, near Mwanza, Malawi. The DVDs had learning videos for farmers about growing rice and chilli peppers and managing striga, the parasitic weed.

Mathews took one set of DVDs to Mpinda, because he was "a successful farmer. Mpinda had a DVD player, but no TV, so he watched the videos on chilli growing at a neighbor's house, using the neighbors TV and Mpinda's DVD player. He watched the

videos as often as the neighbor would let him. The more he watched, the more he learned.

Mpinda soon recognized the possibilities of chilli as a crop, even though he had never grown it.

To start a new crop you need more than a bright idea; you need seed. Getting chilli seed took some imagination. Mpinda went to the market and bought 20 small fresh chillies for 100 Kwacha (14 cents) and then dried them, like tomatoes, and planted the little seeds in a nursery, just like he had seen in the video. Mpinda had already been used to making seedbeds for onions and some of his other vegetables. At 21 days he transplanted the chilli seedlings, as he had seen on the videos.

Now Mpinda has several dozen plants of chillies, a perennial variety which is eaten fresh in Malawi. People cut up the fiery chilli at table, to add some zest to meals.



Every few days Mpinda harvests three or four kilos of chillies and takes them to the market and sells them for 1000 kwacha a kilo (\$1.40).

Mpinda has already planned his next step. After harvesting his little patch of eggplant, he is going to clear the land and plant a whole garden of chilli.

Mpinda has also watched the DVD of rice videos, and although no one in the area grows rice, he realizes that the crop would do well in the slightly higher space, just

above his rows of vegetables. He has already looked for rice seed: there is none to be found in



Mwanza and the agro-dealers won't or can't order it for him, so he is going to travel to the city of Zomba, 135 km away, and buy rice seed there. Mpinda has already identified the major rice varieties grown in Malawi and decided that one of them, Apasa, is the best for highland areas like his.

He is going to plant rice in October, possibly becoming the first rice farmer in Mwanza district.

Mpinda didn't watch the rice and chilli videos as part of a farmer group. He didn't have an extensionist to answer questions. He simply had the videos which he could (and did) watch several times to study the content. And this information alone was enough to inspire him to experiment with two crops that were entirely new to him.

Further viewing

You can watch the chilli videos in English here: <http://www.accessagriculture.org/search/chilli/all/>

And in Chichewa here: <http://www.accessagriculture.org/search/chilli/ny/>

You can watch the rice videos in English here: <http://www.accessagriculture.org/search/rice/en/>

And in Chichewa here: <http://www.accessagriculture.org/search/rice/ny/>

These videos and others are also available in other languages at www.accessagriculture.org

Other DJs

Several DJs around Mwanza gave away the DVDs, and took the initiative to load some videos onto 3gp format to put on cell phones; this means they took some initiative.

Joel Malenga DJ

Video distribution. The videos were not helpful for business. At first people came until Joel ran out of original AA DVDs, which he gave away for free. He didn't copy the AA videos onto his computer because this is a new computer. (I.e. the old one with the AA videos was damaged and the files were lost).

1. How videos changed the business. The customers came to get entertainment videos and

Joel gave them agricultural videos. Joel also fixes phones and offers other services. He asks us for more DVDs, for his regular customers.

2. Other topics customers demand. Irish potatoes.

3. Questions from customers. They asked questions, but Joel couldn't answer them, so he told them to see an extensionist.

Joel did give us some contact information on farmers

Dalitso Boman (Oscar Kossam of Oscar shop)

Video distribution. We meet Dalitso Boman, who explains that he is Oscar's employer. Oscar has gone to Dedza for the day. Dalitso knows little about the DVDs. Dalitso does know that Oscar has given away all his DVDs, but doesn't know what else Oscar has done.

1. How videos changed the business. Dalitso knew about the AA videos but was too busy to watch them.

2. Other topics customers demand. Customers have not asked for DVDs.

3. Questions from customers. Not sure

Christopher Mlauzi in Mwanza

Video distribution. He only gave away all the original AA DVDs. He didn't sell any. He only gave them away, "so people could benefit from them." Mwanza is a town (with people coming and going at the major border crossing), there are not people coming back to ask about the videos. It is a border town. Customers would be interested in DVDs on other topics and would pay 100 kwacha for DVDs.

Christopher made copies of videos for two people on 3gp.

1. How videos changed the business. Christopher's customers don't know about the videos. There is no consistent opportunity to distribute them. Nobody came back asking for other videos. "We moved from the market proper to here, across the road and most of the customers don't know we moved here."

2. Other topics customers demand. They never asked for other topics, except for one who was asking about tomato and vegetable videos. (Although while Ronald and Jeff are in the store, a customer asks us if we have videos on pigeon peas and beans).

3. Questions from customers. One person came to ask what types of diseases attack chilli and how to control them. Christopher said he didn't know.

Chitani Kunyangala, Mwanza market

Video distribution. Most people don't like the videos. They are looking for tomato and maize. Only 7 people collected the videos on 3gp. Most don't take the disk because they don't have the equipment. Chitani last distributed one in August. He still has some original AA DVDs left: chilli (1), striga (3), and rice (4)

1. How videos changed the business. When clients come to collect entertainment videos sometimes Chitani gives them an agricultural video. However, the videos are in a heap in the corner, so Ronald and Jeff ask him why he has not displayed them. He says he did, but now he needs the space.

However, Chitani would take more DVDs. He would pay 250 Kwacha for them, half of what he pays for Malawian movie videos, so at least some DJs might pay for agricultural DVDs. He is not sure how many of his customers are farmers.

2. Other topics customers demand. Tomato and maize.

3. Questions from customers. People come back and they say that "they are nice videos, but they are not useful for us, and can't they make some videos on maize."

Patrick Sungani and striga (A client of George Makolo)

See blog story "Beating a nasty weed" <http://www.agroinsight.com/blog/?p=1532>.

Beating a nasty weed

All over Africa, small shops are offering affordable movies and music videos on DVDs and memory cards. In Malawi the shopkeepers who sell videos are called DJs.

In 2014, in Malawi, the international NGO Access Agriculture asked me and Malawian media expert, Ronald Kondwani Udedi, to meet some of these DJs and to explore their interest in distributing farmer training videos.



Later, Ronald travelled around southern Malawi, giving DVDs of farmer learning videos to some 70 DJs. Ronald gave away the DVDs for free, but told the DJs they could sell the videos to farmers; we hoped that the profit motive would encourage the DJs to copy the DVDs, and to install the videos onto farmers' phones.

Ronald compiled 3 DVDs: one on chilli, one on rice and one on striga, a parasitic weed. The videos were in English and in local languages: Chichewa, Sena and Yao.

We wondered what happened when the videos left the DJ's shop. Did the farmer-customers watch the videos and learn from them? Bear in mind that the farmers got these DVDs cold, with no one to answer questions. The videos had to be completely self-explanatory.



To answer this question, last week Ronald and I visited two farmers who had picked up the Striga DVD from DJs. Ronald rang up one farmer, Patrick Sungani, and introduced himself. Even though the call was a total surprise, Sungani readily agreed to meet us.

Sungani is a young smallholder in Mwanza district, in a village 14 km off the highway. Sungani bought his video at a shop near Mwanza town, on the Mozambique border, some 20 km from home.

Sungani watched the Striga videos with his friends. They learned that Striga reproduces by tiny seeds. Sungani, like many other farmers, had seen the Striga seeds without realizing what they were actually seeds. Sungani and four of his friends organized themselves to uproot Striga plants before it could set seed, just as the videos suggested.

As we went to look at Sungani's garden, he showed us old, dry Striga plants in neighbors' fields. He shook some of the seed capsules, to show us the dust-like seeds. His own garden was free of Striga. He and his friends had plucked all the striga from five neighboring fields.



Sungani watched the videos many times, which farmers often do when they have their own copy. African smallholders recognize striga as a weed, but the plant spends much of its life underground and seems to appear late in the year, so many farmers do not realize how much

damage Striga causes. Sungani learned that Striga "Is a unique plant. Its seed is like a dust. You can't see the plant when it is inside the ground. I learned that it is a dangerous weed and how to control it."

The video encouraged Sungani to make his own observations. For example, he taught himself that older striga plants have a tough root, which can be dug up with hand tools.

We visited a second farmer, Lester Gandari, in Thambani, a town that is barely more than a farm village. Gandari was attracted to the idea of intercropping maize with cowpeas, another innovation shown in the video. Legumes, like cowpeas, are trap crops that kill striga before it can attach its parasitic roots to the maize roots. Gandari decided to alternate one hill (a cluster of two or three plants) of maize and one of cowpea, even though the video teaches several other patterns of intercropping, in alternate rows. Gandari had understood the basic idea from the video (intercropping legumes and grains controls striga) so well that he could experiment with intercropping in ways not shown in the video.

Gandari was pleased with his efforts to control striga. "It worked well. I have bumper crops of maize and of cowpea."

Like Sungani, Gandari had watched the videos several times. Sungani then showed them to about 30 other farmers; about half of them were women. Gandari will continue to watch the videos "because there is (still) more to learn." Gandari is excited about videos now, and would like to see some on maize, eggplant, sugar cane, bananas, and potatoes.

These finely crafted videos feature real farmers, speaking on camera, explaining practical innovations. The videos capture the audiences' imagination, and inspire them to experiment with the technologies. No one convinces a smallholder like another farmer, even when (or especially when) they are on video.

Further viewing

You can watch the striga videos here: <http://www.accessagriculture.org/search/striga/all/>

William Manyonde closes shop

William Manyonde's computer broke down, and he went back to farming. He never made 3gp versions of the videos. After watching the videos three times with Gandari, Manyonde also intercropped maize with cowpea.

William Manyonde

Video distribution. William gave away all the DVDs, but kept a copy for himself. He did not make 3gp versions. He could not burn copies of the DVD because his computer broke down.

Feedback from customers. The people liked the videos, especially striga. One man from Gwedula came back and said that he was controlling the striga in his garden.

1. How videos changed the business. After closing the shop, Manyonde went around giving the DVDs away. As a farmer himself, he especially likes the one on striga.

2. Other topics customers demand. Cassava, maize, groundnuts, pigeon peas, and Irish potatoes.

Oscar Chilemba and the CBO

Oscar Chilemba heads a CBO called Common Vision for Social Development (COVISODE), in Changoima. They used the Access Agriculture videos with 12 farmers' groups, or VDCs (village development committees). Covisode used a sophisticated approach. Instead of giving the Access Agriculture DVD to the senior male of the group, Covisode identified a person who owned a TV set and a DVD player and gave him or her the DVD, to show the video to the rest of the VDC.

All of the VDCs watched the videos, at least 20 people in each group, and another 320 watched the videos in Covisode's office. Women were included. People began to micro-dose fertilizer

and plant rice in lines, among other practices. Before we left, Ronald gave Oscar the software to convert files to 3gp (for cell phones). Oscar has all the Access Agriculture videos (from the three DVDs) on his laptop. Oscar was quite pleased to get the new software. He was excited about the idea of videos playing on cell phones.

Discussion. NGOs (and some CBOs) know how to extend agriculture, but they may not know how to format a file. On the other hand, the DJs are just the opposite: they can easily convert the files, but have no experience in extension.

Paul Ndaziwa in Chapananga

Paul has given away all of his DVDs and says he gives away many copies for cell phones, but he doesn't keep track. He says that sometimes he puts learning videos on customers' memory cards when he is loading entertainment videos. He claims that people like the Access Agriculture videos, and that they are a "game changer", giving him another product to attract customers.

Paul Ndaziwa

Video distribution. A lot of people have welcomed the videos. Paul distributed all the DVDs and put them on 3gp and distributed them. Now people are growing more sorghum, as cotton prices fall, and so now people are taking the striga videos. Since February Paul distributed about 40 videos on 3gp, for free, but it might be many more.

Paul says he does not sell the videos because "I got them for free so I can't sell them."

1. How videos changed the business. Sometimes Paul puts the AA videos on the memory card when he gives entertainment videos. "I don't keep track, but I know the customers personally and have their phone numbers."

Having the AA videos was like a game changer. It's like someone who is in the market, selling doughnuts, and then they start selling groundnuts. "Your doughnut customers come to you, and there you are selling groundnuts." i.e. customers come and the dealer has a new product, so clients might buy the second product as well. The agricultural videos attract new customers. Many people came looking specifically for agricultural videos.

Feedback from customers. Users like Roke have benefited. Before watching the videos, he didn't know how dangerous striga was.

2. Other topics customers demand. Bees, cabbage, mustard

3. Questions from customers. "They always come back to ask me technical questions. I try to explain what I know."

Henry Harrison faces stiff competition

Henry Harrison in N'gabu said that when he started this business in 2014 he was the only DJ in town. Now there are four DJs and the competition is so fierce that Henry is thinking of getting out of the entertainment business.

Henry Harrison

Video distribution. Henry formatted the videos for cell phones and he gave some away. But he didn't write down the names and numbers of the customers.

Distribution to other DJs. Gave some videos on 3gp to a DJ in Sangwe.

Feedback. People liked the videos. They liked having the videos on their phones.

1. How videos changed the business. At first a lot of customers came and asked for AA videos.

2. Other topics customers demand. Cotton.

3. Questions from customers. One man took the striga DVD and came back and got the chilli DVD and started farming chilli.

Eric Chibondolo

Video distribution. Some customers buy a blank DVD and bring it to the shop to burn, where Eric charges them 100 Kwacha to burn the DVD. If they buy the DVD from Eric, he burns it for free. Eric gave away the original DVDs and videos to at least 30 on phones, but Eric is not sure how many. The younger brother does not keep records on who takes the videos, but does charge 50 Kwacha to copy each video.

Distributed videos to other DJs. Three other DJs brought in blank DVDs and Eric burned the DVDs for them. One came back later, asked if there were any more videos, and took the one on honey (which Ronald had left with Choster Chilemba).

Customer feedback. A lot of people liked the chilli and striga videos. Rice, not so much. There is not much rice growing here. There is one customer, who practices an innovation with chilli, but he lives far away, across the Shire river, and you have to take a canoe through crocodile infested waters.

1. How videos changed the business. People are coming more. But some ask questions, like “Is it a competition for you? I say no, it is just information for you to improve your farming practices.” The videos have created a new customer base of older men who come back and are interested in learning videos. Now the business it is not just youth and entertainment videos. An older man comes in to take videos on his phone, and his friends see it, and ask for copies. So he tells them they have to see Eric. “So by word of mouth, it is spreading that I have videos and they come in to get more. There are many new customers. I have not counted.” Sometimes these older men also ask for music videos and audio music. They come from far away, so they come on market day, and one thing they do on market day is get new videos.

2. Other topics customers demand. No, none. But Eric would be interested in videos, especially on drought resistant crops, like sorghum or maize to grow in dimbas.

3. Questions from customers. All they ask is, “if we grow these, do you have markets for these?”

A nice shop gets better

Finias Ching'oma in Bangula has improved his shop since our visit in 2014. He has a large, chest-type refrigerator for keeping drinks cold and sells a wider range of electronics projects. He complained a bit about customers who said the Access Agriculture videos were not about the type of farming they do here.

Like several of the other DJs who received the DVDs, Finias took the time to convert (at least some of) the videos to 3gp (for cell phones). When a DJ converts the videos to another format, it is an investment in time that adds value to the videos, and indicates that the DJ thinks they are worth the same effort as a kung fu movie.



Finias Ching'oma helps a customer.
Some DJs are in business to stay

Finias Ching'oma

Video distribution. Some people got the DVDs, including an extension worker, and some farmers. They prefer DVDs. Finias converted a few of the videos to 3gp. Finias sells the DVD for 500 Kwacha (1 US dollar). He burns some DVDs. Since February he sold 4 DVDs. He has kept copies of the DVDs to use as master copies to burn DVDs for customers. Finias would like more videos. People will pay 500 Kwacha for these DVDs. Finias has no information on who he gave the videos to. He kept a notebook with the contact information, but lost it.

Distributed videos to other DJs. No.

Customer feedback. The people love the DVDs, but the topics are not quite right for this area. These are high, drylands, so most of the crops are sorghum, millet, a little maize, beans. Other (lower) areas in the Shire Valley have rice.

1. How videos changed the business. Finias now informs customers that he has agricultural DVDs.

2. Other topics customers demand. Mostly cotton, but also sweet potato and maize.

3. Questions from customers. None

DJ Sau

Sautso, or DJ Sau, doesn't have a shop. His main line of work is playing music on weekends at weddings and other events. Sau has managed to give the DVDs to 15 people. He says that the local agricultural supervisor (extensionist) was excited about the DVDs and said that he had been looking for such videos. The extensionist took DVDs from Sau, and later came back to ask for more. The agricultural supervisor was visiting Sau on other business when Sau suggested he take the Access Agriculture DVDs. (Sau distributed the DVDs more or less as a customer service).

Sautso Ndalama

Video distribution. Sau formatted some for cell phones. Then other people asked for them to watch at home. Sau gave videos to over 15 people; mostly people are interested in the ones on rice and bees (Sau operates in a low-lying, rice growing area).

Distributed to extension people. Sau gave videos to the agricultural supervisor at the ministry of Agriculture, Mr. Nakwanje, and to Mr. Nisomeli. Saud did not sell any DVDs, but people liked the cell phone versions. Mr. Nakwanje collected 7 DVDs. He said he wanted to distribute them to the farmers. He got copies of rice, striga and chilli for his computer. One extensionist asked where he could get more videos. Sau showed him www.accessagriculture.org. The extensionist wanted to see if AA had more videos.

Feedback. One person said that after watching the video on honey, that he had established a honey business.

1. How videos changed the business. Little change.

2. Other topics customers demand. None.

3. Questions from customers. No.

Yohane Mbewe

Video distribution. Yohane shared the DVDs, but still has some left. He converted the chilli, rice and striga videos to 3gp. He gave the videos away for free. This list of viewers is in my shop (but it is locked up and the employee has the key). They can pay for the videos, but not much. I have not given away all the DVDs. There are still some left.

Feedback. People welcomed the DVDs. Their crops improved. They were rice farmers already. They applied some of the methods shown in the videos.

1. How videos changed the business. When people come to get the agricultural videos, they buy other things in the shop. Some of the customers who bought agricultural videos came

from far away, and they just saw the DVDs in the shop and wanted them. Others heard about the videos from their friends and came to the shop looking for the DVDs.

2. Other topics customers demand. None.

3. Questions from customers. They ask “who are these people who brought the videos?”

DJ Thomzy makes a career

DJ Thomzy may be young, but he is a real businessman. He has moved his shop in Nkhate, Chikhwawa, twice since we first met him in 2014, seeking lower rents. He understands the importance of keeping overhead low.

We find DJ Thomzy in a room that costs 15,000 Kwacha (about \$20) a month. When Jeff chides him for not having a sign to advertise, DJ Thomzy shrugs off the suggestion, saying that he is already known here. It must be true, because his shop is full of people.



DJ Thomzy runs a serious business. The only decoration in the shop is a list of prices for services

Thomzy gave away all of the DVDs that Ronald gave him in 2015, and put the videos on his hard disk. He converted the videos to 3gp to put on farmers’ cell phones. Thomzy asks for 500 Kwacha (\$0.70) to burn a DVD and 150 for each individual learning video on a memory card. Thomzy has a wife and a baby at home and this burning center (which is what the ICT shops are called) is his only source of income, so he has to make the business pay.

But the DJs themselves treat each other more as confederates than as competitors, and so when several of the other local DJs asked why only Thomzy got the Access Agriculture videos, he loaned them the disks so they could rip and return them.

In one little twist, Thomzy knows DJ HB, who we met in Fatima in 2014. DJ HB’s shop is now vacant, but DJ Thomzy says that DJ HB has moved to another town, Chole, in Chikhwawa, and is distributing the learning videos there. That means that DJ HB has the Access Agriculture videos, but did not get them from DJ Thomzy, or from Ronald, because DJ HB had moved shop when Ronald looked for him in 2015. The DJs are connected to each other through an informal network.

DJ Thomzy

Video distribution. Over 20 people got at least one of the 3gp videos. DJ Thomzy kept a master copy of the AA DVDs. His DVD writer is broken, but he loans the DVD to other people to burn. When people see a friend watching an AA video they ask, “where did you get that?” and the friend says “from DJ Thomzy,” so they come and ask Thomzy for the videos.

Most of the farmers who got the 3gp videos live far away. (Thomzy knows one who lives nearby here, but he is not here right now, so Ronald and Jeff cannot visit him). Thomzy did not keep any names or phone numbers.

Distributed to other DJs. He gave the videos to many other DJs. He would take the DVDs to their shop and ask them to copy the video onto their hard disk.

Customer feedback. This is a rice growing area and so people love the videos.

- 1. How videos changed the business.** New customers, a lot of people are coming to get the videos.
- 2. Other topics customers demand.** A couple of people asked about tomato.
- 3. Questions from customers.** None.

Lead farmer in Livuzu

Joseph Martin is the chairperson of the Makhwila Youth Network and a lead farmer at the Livuzu EPA (extension planning area, of the Ministry of Agriculture). He screened the videos for some 25 of the youth (mostly boys), group members who gathered to watch the videos.

Joseph Martin

- Video distribution.** He just delivered the videos to the youth members.
Customer feedback. They said they were very good DVDs. But they didn't do anything new after watching the videos, because " they are waiting for other experts."
- 1. How videos changed the business.** NA
 - 2. Other topics customers demand.** Rice, groundnuts, and soya beans
 - 3. Questions from customers.** They asked how to deal with Striga, how to apply animal dung to defeat it?

Only real farmers

Unlike some shops which have no décor, Alexious's walls are lined with the cell phone cases, batteries and cables he sells. He says "I was cautious. I only gave the videos to the real farmers." He tried to publicize the Access Agriculture videos. When people came to the shop he would say "you will like this," and he would give them the video.



Alexious seems to be in touch with the farming community

"One who sells used clothes here in the market bought the video and came back and said he had managed to control his striga. He had only been a maize farmer, but he learned from the video that he could grow cowpea too. That man really likes the videos."

Alexious Basa

- Video distribution.** A lot of people got the videos, especially rice. Alexious converted the files for phone use. He says he didn't sell. He only gave the videos away. We ask how much people would pay and he says up to 500 kwacha for a DVD, "But it's negotiable. If they really need it they can get it for less."
Distributed to other DJs. No.
Customer feedback. People from the highlands liked the Striga videos. In the lowlands they don't have Striga
- 1. How videos changed the business.** "The videos brought in new customers when people watched from their friends, they would come to me and ask for the videos."
 - 2. Other topics customers demand.** Bees. Legumes
 - 3. Questions from customers.** A lot of people asked where they can get the equipment they saw in the rice video, the little hand tool the weeder. They wanted it.

Harry's loyal customers

Harry Nyapigote's shop in Fatima is hard to find. It is in a room the size of a closet, inside a family compound, a short walk away from the other shops. There are no signs and no music playing. Even with poor location and scant advertising, Henry must be doing something right, because the place was packed with young customers.

The DJs know more about the customers who got the Access Agriculture videos on DVD than the ones who got 3gp videos. The customers who got the videos on phone cards live far away. The DJs do not know them as well and do not have their names and numbers. We asked why that was. Harry explained that the ones nearby live in the small town. They are more likely to have electricity and DVD players. The ones from far away are off the road, older men, farmers who have come to town for market.



Harry's shop is out of the way, but full of customers

Harry Nyapigote

Video distribution. A lot of people like the videos and took them. A lot of people took the DVDs, and I converted them.

1. How videos changed the business. The video helped get more customers. When customers would come to get a video, Harry would tell them about the agricultural videos. Harry charged 150 Kwacha to put a single video on a cell phone, and 500 Kwacha for a set of videos on a DVD.

Feedback. People wanted you (Ronald) to come and do some screenings. A lot of people like the rice videos because there is a rice scheme near here.

2. Other topics customers demand. Tomato, sweet potato, and vegetable.

3. Questions from customers. In the video on striga, it mostly attacks maize. People asked if there was a chemical for maize. I used to tell them that the ones who gave me the videos would communicate.

Chrispact Fabiano

Video distribution. Only gave away the original DVDs for free. People would pay 300 Kwacha for a DVD and 100 Kwacha for a video on the phone.

Distributed to other DJs. No.

Feedback. The people value the videos. From the videos people learned how to prepare a nursery for rice and all the work up to harvest. A lot of people don't know how to get chilli seed. They wanted to know if there was an advisor to help them. For rice, when they saw that machine that prepared the land, they believed that the rice they saw was a bumper harvest because of that machine.

1. How videos changed the business. They brought in some new customers. Chrispact distributed all the original DVDs and wants a new lot.

2. Other topics customers demand. Somebody asked for one on cocoyam.

3. Questions from customers. None.

Combined fertilizer and software shop

Funwell Chimbalanga (Aduniya Records) in Bvumbwe has a combined video and fertilizer shop, which caught our attention in 2014. He was one of the few DJs who was already in agriculture and ICT, although he was not integrating them. It was as if he ran two unrelated businesses from the same store. We wondered then if having the Access Agriculture videos would help Funwell to link the two businesses, and it did, a bit (see box below).



Meeting Pirilani Chimweta (right) at Funwell Aduniya's video and fertilizer store

In 2014, Funwell had asked for the video on "Raising Improved Chickens." Even though it was only available in English, many people have watched it. Funwell says that they watch the images, which are "stage by stage" and help viewers to follow the action. Plus, in every family there is usually at least one person who speaks English who can explain it to the others.

Funwell Chimbalanga

Video distribution. Funwell gave away a lot of DVDs and a lot of converted videos. He kept 2 DVDs for himself. People pay 500 Kwacha for a DVD and 100 per video on a memory card. Maybe 39 or 45 people have received videos.

Distributed to other DJs. To one near here and to 2 near Thunga

Feedback. Everybody who came back said they liked the videos. "They liked rice, and the chicken video you gave me in 2014 (improved chickens) in English. They liked the video about rice, but most of them have not been successful because there is no dambo (wetlands) here, only drylands."

1. How videos changed the business. There is some income from the AA videos, and a few new customers. Sometimes the fertilizer customers and the video customers are the same, but sometimes they are different people. If a customer comes to buy fertilizer, Funwell would say, "I have agricultural videos, come inside." And the customers spread the word to other farmers, so (the AA videos) became popular in that way.

2. Other topics customers demand. Tomato, maize, cabbage.

3. Questions from customers. No, the videos are straightforward so people don't ask questions.

Raising chickens

Pirilani Chimweta is one of Funwell's customers. Pirilani said he watched the chicken video on his phone four times, to follow it properly. He watched it with his wife, and they were able to see it well enough on the small screen, and the audio was good too. "I was able to follow it," he said. Pirilani doesn't speak much English, so after watching the video alone with his wife, he watched it with his older brother, who understands English, and explained the video to Pirilani. "But the video also goes step by step, and that helps." Access Agriculture video images are clear and organized into a logical sequence.

He adds that he watched the video many times. "I took it last year and watched it over and over."

In spite of the effort that Pirilani made to understand the content of the video, he has still not tried raising improved chickens. "I have local chickens at home, not hybrid chickens like in the video," he says. But Pirilani learned from the video that he could put his hens in a chicken coop, "because if you leave local chickens to go about, they don't do well. So now they even have a house."

John Porter (Brother in Christ of Martin Kawawa)

Video distribution. Mr. Porter gave away the original AA DVDs for free. He did not convert them for cell phones nor did he burn any DVDs. (It is possible that Martin made some cell phone versions, but Mr. Porter does not know about it).

Feedback. The videos were helpful. They help people to know how to grow those crops.

1. How videos changed the business. Some people came to look for music and Mr. Porter gave them the videos for free. Later other people came looking for the agricultural videos, so the DVDs were like an advertisement to come to the shop.

2. Other topics customers demand. Other crops, like maize,

3. Questions from customers. They are complaining that the Chichewa versions of the video are hard to find on the DVD. The language menu just starts to play. They put the DVD into the player and it just starts to play in other languages. They have to fast forward through other language versions to find the Chichewa versions.

Blackouts damage the DJs' business

In Luchenza, the power was out, and none of the DJs were at their shops, or answering their phones, either. This made them hard for us to find, but more importantly was impairing the DJs' ability to stay in business, and to keep distributing videos. Long and frequent power outages make it more difficult to keep one's cell phone charge. Few of the DJs are able to invest in generators, to adapt to the blackouts. We see one large "video show" (which plays movies on a large TV set for a paying audience). The video show had bought a generator, so playing videos may be more profitable than copying them.

The patrons visiting the hospital

Gerald Jali was happy to meet with us in Mulanje, a district capital. He had little else to do; with the power off he couldn't tend his burning center.

Gerald had a slight twist on the difference between customers who take DVDs and those who get their videos on cell phones. Gerald's shop is just 200 meters from the entrance to a mission hospital. Patients often bring a relative to help care for them and comfort them during their hospital stay. For entertainment, these caregivers often look for videos. Since the visitors are far from home, their cell phone is their only viewing equipment. So the patients' caregivers buy videos to play on their phones. People who live nearby get more videos on DVD, because many people in town have DVD players.

Gerald Jali

Video distribution. Jared gives customers the DVDs and videos on memory cards. He kept a list of some names and numbers. Many people took videos. Some of them got the agricultural videos on 3gp. Jared distributed most of the videos on DVDs, especially to the people who live in town, where a lot of people have DVD players. Jared charges 50 kwacha to put videos on cell phones.

Distributed to other DJs. No.

Feedback. “Those videos were nice. What videos do you have on other topics?”

1. How videos changed the business. A lot of people have started coming back for agricultural videos. How did you distribute the videos? When people came to buy entertainment videos. Jared would upload some agricultural videos as a bonus, to let the customer know that Jared had these videos. He gave away the original AA DVDs for free, but wrote down the clients’ phone numbers. “I told them I needed their numbers for the owners of the DVD.” New customers would come after seeing that their friends had these videos. Clients would also come back looking for other topics.

2. Other topics customers demand. Onion, cabbage.

3. Questions from customers. No.

My dad watched your video

Lonjezo Kapitao was sleeping in on Sunday morning. Before we had a chance to stop them, the family had awakened Lonjezo, who soon emerged, sleepy and grumpy. He was working less in the burning center and more as a bartender. He had been up until 2 AM the night before. Lonjezo’s one-year-old son came over and sat in his lap. Lonjezo’s own parents were also listening in. This was lucky, because Lonjezo said that he gave the rice videos to his dad.

Lonjezo Kapitao

Video distribution. Gave out all the DVDs and even gave his father some on the phone. He burned the videos onto 11 DVDs for customers. He gave videos on cell phones to about 25 customers, and charged nothing.

Distributed to other DJs. 8 other DJs, who burn videos.

Feedback. People said they were great videos and that they would come back looking for more.

1. How videos changed the business. Lonjezo got quite a lot of customers. Many customers come in, especially from Mozambique on market day, looking for the videos

2. Other topics customers demand. Tomato, sorghum, pigeon peas and ground nuts.

3. Questions from customers. They would come to ask, but Lonjezo would say, “I’m not an expert, so go home and watch the videos again. They are pretty straightforward.”

Rice to eat with my children

When Ronald gave the DVDs to Lonjezo in June, 2015, Lonjezo listed his dad’s phone number. So later, the phone survey rang up Alfred Kapitao, the dad. Alfred went to Lonjezo and asked why this survey was ringing him up, asking about videos. Lonjezo explained and so Alfred, a small-scale rice farmer, asked for the rice videos on his cell phone.

Alfred couldn’t get the videos to run on his cell phone, but he was persistent and got them to play on a relative’s phone. The relative held the phone while Alfred and another man watched them. That was enough to convince Alfred that he wanted to give the videos more attention. Alfred asked Lonjezo for a copy on DVD and watched the videos several times at a neighbor’s house in Mulanje town. So different formats serve different sections of an audience, and at times also complement each other’s function.



Sharing with the family. Lonjezo with his parents, son and little brothers

Alfred was especially taken with the idea of making a rice seedbed and keeping track of the days before transplanting. He transplanted as he had learned on the video. Unfortunately, it was a very dry year. Instead of 30 sacks of rice, Alfred only harvested 10, but he is convinced that in a normal year he would have harvested 40 sacks of rice, using the new techniques he learned from the videos. He did not save any seed, but brought all of the rice home to eat with his children (as he put it).

Alfred was impressed with the little hand-powered, wheeled weeder that he saw in the rice videos, and asked where he could buy one. (He's not the first person to have asked about that particular tool—again farmers are reading the images as well as the narration).

"What do you like about the weeder?" we ask.

"Working with manual hoes breaks my back. The weeder looks easy to use."

Mayeso Chiwaya

Video distribution. Mayeso was burning on DVDs and on phones. The person buys a blank DVD for 150 Kwacha and he burns it for free. To get them on cell phones people pay nothing. Mayeso burned DVDs for 4 people. On phones he gave them to 2 people recently and can't remember the others.

Distributed to other DJs. No. Most of them around here already have the DVDs.

1. How videos changed the business. Giving away videos for free. "Most just like the information, so I didn't want to deny them the information."

2. Other topics customers demand. Irish potato, rice. We need more rice videos because I don't have those, and bean.

3. Questions from customers. Some people were growing rice or chilli. They would ask what type of soil to use. Mayeso would just say to plant rice in the *dambo* (low wetlands, called *bas fonds* in Francophone West Africa), but for chilli he told the customers that he didn't know.

Mustapha Aufi

Video distribution. Sometimes customers come by the shop and Mustapha convinces them to take the videos about agriculture, on rice farming, chilli, and Striga. He gave them the videos for free. Mustapha burned DVDs. Some customers asked him to burn all 3 DVDs. They would ask for the original and for copies to take. He charged 200 Kwacha for the blank DVD, but did not charge to burn DVDs or to load videos onto cell phones. He gave out 15 copies of the DVD and many on the phone.

Distributed to other DJs. Two teachers came, who teach in Phalombe District, shop and to use the bank. Mustapha gave them some videos, and he gave videos to burning centers in Chinyawa village on the border with Mozambique.

Feedback. Most come back and ask for more videos. They ask what videos are there on other crops?

1. How videos changed the business. When people come and get those videos, they go home, and other people come and ask for those videos and the first guy says, "You can get those videos from Mustapha Media, in shop number 4 in the market in Chitakare." So those people come and get the agricultural videos from Mustapha, and they get music too.

2. Other topics customers demand. Maize, most of the people around here farm that crop, and tomato and sweet potato.

3. Questions from customers. No, none. They say that the videos are quite alright. Some watched them and gave the DVD to a friend to watch.

Emmanuel Bhima

Video distribution. Ronald gave him 9 DVDs in 2015. Emmanuel made copies and gave them to farmers on 3gp. He gave videos to 5 people on DVDs, and on 3gp he didn't count, but they were many. "I lost track of the names of the people who got the videos on memory card."

Distributed to other DJs. None.

Feedback. One customer said that they used to plant rice and the video taught them a way to plant rice that was simple and good. The old way took so many days to practice. Now they are harvesting more rice.

1. How videos changed the business. The videos do help to get more customers. There were many new customers, but Emmanuel was expecting more farmers, because this is a big farming area.

2. Other topics customers demand. They were asking "Do you only have these three topics?" They wanted maize and other crops, more crops.

3. Questions from customers. Some were watching the English version, so Emmanuel taught them how to find it in Chichewa.

My business was so happy

Henderson Sande's shop in Chonde is cramped, barely wide enough for two small desks.

Henderson sits at one, while some excited pre-teen boys play a computer game on the other desk. Henderson keeps some barber's clippers on the table, and will also cut customer's hair, as attested by a pile of hair clippings in the corner.

Henderson says that people wanted videos on tomatoes. Jeff says that we have a video in English on drip irrigation for tomatoes, and Henderson asks for it. We loan him another Access Agriculture DVD and it takes Henderson four minutes to rip it. He's familiar with his software.



Henderson distributed videos to at least 40 people

Henderson Sande

Video distribution. Distributed the original DVDs to farmers and burned the DVDs to multiply it for many people, almost 25. The videos were free; customer just had to buy the blank DVD for 150 Kwacha. Henderson converted the videos and gave them to 15 people on their phones for free on phones, and charged 100 Kwacha to put the videos on a memory card. He could sell cards if the customer didn't have one. The customers who got DVDs live nearby. It is harder to recall the ones who took the videos on market day on their phones (when there are more customers, many from surrounding villages, who are not as well known).

Distributed to other DJs. No.

Feedback. The video was so good, they said.

1. How videos changed the business. "My business was so happy because many people were coming because of the DVDs. When they came here to burn music I told them I had the DVDs."

2. Other topics customers demand. Tomato, carrot. Around here people grow tomato, carrot, and onions.

3. Questions from customers. No, but they appreciated the DVD, because it was correct and clear.

When the flat TV screens came into Malawi a couple of years ago, wealthier consumers dumped their old TV sets onto the market, so that a TV that cost 90,000 Kwacha (\$125) in 2014 may cost only 20,000 Kwacha (\$27) in 2016. At least in the small towns, people prefer watching videos on the comfort of their TV screen. The ones who come in for videos on cards are people off the electrical grid, i.e. the farmers. However, few of the DJs kept records of this. The DJs don't know the farmers from remote villages very well and don't have the farmer-customers' numbers.

Charles John

Video distribution. Not sure. The employee, Chimwemwe, left. He was the one who was keeping the records. Charles burns the videos onto blank DVDs, and gave them to about 10 people. He charges 300 Kwacha for that: 150 for the blank DVD and 150 to burn the videos, for a total of 300 Kwacha. But this is a discount, because he charges 500 for entertainment videos

Distributed to other DJs. No others. The only other DJ that Charles knows is Lameck, but Ronald already gave the DVDs to Lameck.

Feedback. When Charles formatted his hard disk he lost the copies of the Access Agriculture videos he had on it. He had not kept a copy of the DVD to use as a master copy, but customers were still coming in asking for the AA videos.

1. How videos changed the business. A lot of people started coming when Charles gave out the rice videos. Charles does not seem to think that the videos did much for his business, because he asks us "What is the benefit of this?"

Ronald says "You can earn money by selling the DVDs."

2. Other topics customers demand. Beans, maize, groundnuts, pigeon peas, sorghum, and vegetables.

3. Questions from customers. They asked about equipment for rice farming, the little weeder

Building relationships with customers

Mphatso Saidi in Nkando says that the videos "worked perfectly." He gave copies for free on memory cards to at least 67 people. He was keeping track, but when he moved his shop he lost his notebook. Mphatso used the videos to build rapport with his clients.



Mphatso reached a lot of people

Mphatso Saidi

Video distribution. Shared the videos with farmers. Mphatso gave them out on memory cards (i.e. on phones not on DVD) to at least 67 farmers, for free.

Distributed to other DJs. No

Feedback. They got benefit from the videos. When they watch the videos they go and take care of their crops.

1. How videos changed the business. When they buy videos, Mphatso gives them the agricultural videos as a bonus. Because the customers get agricultural videos at the shop, they come back to the shop more often (building relationships with clients).

2. Other topics customers demand. Cowpeas, beans, and peas.

3. Questions from customers. No.

Kenneth Nenani

Video distribution. About 25 people got videos on memory card and 15 on DVD. The shop was burning DVDs, not just giving out the originals. Kenneth would give them about three videos at a time, depending on how much space they had on their card. Kenneth gave the videos for free, because people asked for them for free. The customers who collect videos on phone are people from other villages. The people from here have electricity and DVD players.

Distributed to other DJs. No. They didn't show interest.

Feedback. "After they watch them, they come back and ask what other topics I have."

1. How videos changed the business. It didn't change it much, but a lot of people were asking for agricultural videos

2. Other topics customers demand. Cabbage, onions, pigeon pea, tobacco, and maize.

3. Questions from customers. They didn't ask questions because they understand the videos.

Reformat hard drive, lose videos

Maxwell Matchado in Phalombe town had given away all of his Access Agriculture DVDs when he got a virus on his computer and had to reformat his hard disk. He keeps an Access Agriculture poster on his wall.

Ronald brought some of the leftover Access Agriculture DVDs on this trip. He thought he brought enough DVDs for the journey, but he's run out. He didn't know that so many of the DJs would have run out of the videos and not kept a copy. They seem to rely on getting fresh content constantly. There is little demand for old movies, so the DJs are not used to retaining content. They don't keep much of a library. They get viruses and have to reformat their hard drives.



Maxwell sits under his Access Agriculture poster

Maxwell Matchado

Video distribution. Burned DVDs for 40 or more customers. Gave out many videos, over 100, on flash (USB memory sticks) and memory card. Maxwell kept a list of people but can't remember where he put it. People come from all areas to trade here and take videos on phones. He charges 100 Kwacha to put videos on cards, and 500 to burn a DVD.

Distributed to other DJs. Gave the videos to about 3 other burning centers.

1. How videos changed the business. The videos brought in people, but Maxwell formatted his hard disk and so no longer has the videos.

2. Other topics customers demand. Can't recall.

3. Questions from customers. No.

A well-organized DJ

Near Phalombe, Gerald Pipe is one of the few DJs with a laptop. The battery allows him to get some work done during the long blackouts that are crippling many of the burning centers now. Gerald displays DVD covers for movies on his walls, including for the Rice Advice videos.

Gerald Pipe

Video distribution. Distributed the videos and kept names. "Most people are waiting to hear from you," i.e. from Ronald. (To keep retailers interested, distributors need to build some sort of regular relationship.) Gerald used to burn DVDs, but his writer has a problem. He burned

DVDs for 3 people. On flash or memory card he gave them to 15 people. He asks them to buy the blank DVD for 150 Kwacha and he burns it for free. He charges 60 Kwacha to put the videos on memory card.

Distributed to other DJs. No.

Feedback. The customers said that the rice video was good, especially that kind of rice (probably Nerica). They were not sure where to get that kind (variety) of rice seed.

1. How videos changed the business. A lot of people used to come and collect the videos.

2. Other topics customers demand. Onions, groundnut, and cabbage.

3. Questions from customers. They asked about Striga, Gerald can't remember the question.

A farmer off the grid watches all three DVDs

Jaden Goliati is a farmer who got videos on his cell phone, from Jared Pipe (see above).

Mr. Goliati lost the videos when he lost his cell phone and got a new one. He watched rice, Striga and chilli about 5 times on the phone, mostly alone. The picture and sound were good, especially for the rice and striga videos.

Mr. Goliati learned that if you want to plant rice, you should choose the right seeds and make a proper nursery, not just sow by broadcast. He also learned that Striga attacks the roots of plants. He learned about grading chilli fruits for quality at harvest time.

Mr. Goliati applied some of the new ideas. He made a rice nursery, but the rice did poorly because this was a drought year. This was the first time he had made a rice nursery, which is a major change. He used to broadcast his rice seed, before he watched the video. He planted a small plot but harvested more than he was expecting and there was not many weeds or diseases.

He didn't plant chilli. He wanted to know where to get chilli seed. For Striga, he started to uproot the weed whole.

He learned several things and could apply some, even though he only watched the videos on his cell phone. He only lives a short distance from the highway, but he lives far enough from the road that his house has no electricity.

A DJ who knows everyone in the village

Peter Bwanali is an older DJ in the village of Naminjiwa. He knows everyone in the surrounding villages, having lived here all his life. He is a rice farmer, as are his sisters and his friends. After watching the rice videos, he adopted some of the practices, especially making a nursery and planting in lines. This improved his harvest by four extra bags of rice. He sold three and was able to use the



Jaden Golati learned a lot by watching videos on his phone



Peter Bwanali (rt), farmer and DJ

money to buy a used laptop. The battery doesn't work very well, but being able to buy it was encouraging and he wants to make more money from rice and invest it in his burning center.

Peter says that after the rice harvest, there is still some moisture in the soil. He asks us if he could plant a second rice crop, late in the season. The videos have encouraged him to think creatively. We are not sure if he can plant a second rice crop on residual soil moisture. We suggest that he knows better than we do, and he smiles in appreciation. We suggest that Peter try planting rice after the harvest, but on a very small area, to see what happens.

Peter also asks about the rain. He says that here people wait for the rain before planting in the dambo (lowland). But in the videos it seems that people make a nursery before it rains. He asks if that is possible.

Peter Bwanali

Video distribution. When Peter got the videos he converted them and put them on his phone and went around showing people he had them so they would come to the shop and get them. 12 people got videos on DVD. On flash or memory card, 16 people. Peter doesn't have a writer to burn a DVD, so he just put them on the phone. A video on flash costs 50 Kwacha and on memory card it costs 30.

Distributed to other DJs. Shared striga in chilli and rice with one burning center in Phalombe.

Feedback. (He takes us to meet farmers).

1. How videos changed the business. He publicized the videos actively. See above about buying a laptop.

2. Other topics customers demand. Maize, cabbage, and vegetable rape.

3. Questions from customers. Are there any other topics?

A snappy answer

In the village of Ulolo, within Peter's area of action, he knows every path. We leave the car at the end of a road and walk into a road-less area on a rocky alluvial fan, where the houses sit among the boulders which have been tumbled out of the mountains by floods.

Mr. Matola is working on a tobacco nursery, with a group, but he takes a few moments to tell us about his rice.

Mr. Matola says "Last year when I watched the video I noticed that our friends (the people in the video) were doing things differently, such as applying fertilizer, so I did it and the results were amazing. I harvested nine bags. Before it had been three or two. I applied 25 kg of urea, spreading it (indicates broadcasting) like they do in the video. When I watched the video, I applied fertilizer in the nursery. I transplanted in a row like I saw in the video. I applied fertilizer, by spreading it, in the nursery and in the garden." That is a lot of innovation to adopt after watching videos on a phone: urea, nursery, and row planting.

Last year, before planting rice, he watched the videos five times, on the phone, with about seven people, including men, women and children.

As we talk, some of Mr. Matola's neighbors see us and stop to listen at a respectful distance, until we have eight or 10 men and women listening to this engaging story of innovation. Mr. Matola has a sense of humor, and a way with words. When we ask him if the videos had good

enough sound and picture quality on the cell phones he snaps back “Do you think I would be here telling you all these things I have learned and done if I had not been able to see and hear the video.” The onlookers burst into laughter, and so do we.

Then Mr. Matola shows that he has been thinking about the videos a lot, by asking a serious question. “Can you plant in lines without making a rice nursery?”

You certainly can. It is called direct seeding. We briefly explain it and Mr. Matola listens carefully. He picked up both ideas from the video, making a seedbed and planting in lines. It’s logical to wonder if the two practices can be separated.

Rice in lines

Peter is kind enough to take us home to meet his wife and two of his three sisters. His sister, Katherine Lihoma, explains that she watched rice videos in January 2016, four times on the phone with her sister Tamara. The audio was good and the picture was clear. They learned how to plant in lines. After that they planted in lines. They made a nursery for the first time.



Katherine and Tamara Lihoma in their ratooning rice field, with young sweet potatoes on right side

The sisters say that they harvested a lot more rice than in the past.

They thought that the video was clear and easy to understand. They just had to follow the steps (i.e. the video is organized in a logical straightforward sequence).

Katherine says that “Only one farmer came to see the video on my phone, but a lot of farmers who came to see my garden say that they are going to do the same thing,” because she used to get ten bags of rice, but this year she harvested 15. The rice field is a visible landscape, as Van Mele (2000) observed of farms in the Mekong Delta.

We go to look at the rice field, which is right next to the house. They harvested the rice and planted some small plots of sweet potatoes, but most of the rice plants are starting to ratoon. Before, they watched the videos the sisters used to broadcast the rice seed, and this rice definitely looks like it was planted in lines.

A farmer-barber who shares videos

Peter takes us to see Chifundo Keste the barber, who has the shop across the highway from the burning center. Chifundo watched the videos at home with his parents. Then he showed them in his barbershop.



Chifundo shows videos to the farmers when he cuts their hair

Sometimes the customers come in and watch the rice videos while they are waiting to have their hair cut. At other times, Chifundo’s friends come by and ask to see the videos again. It is an innovative way to watch the videos,

while having a haircut.

After watching the videos several times, Chifundo made a nursery and applied fertilizer. “Before, we didn’t apply fertilizer.” Input shops in Malawi sell fertilizer repacked into bags as small as one or two kilos. Chifundo got 10 kg of NPK and 10 kg of urea.

In the past, where he would harvest one bag, this time he got four bags. Chifundo adds “But I could get more if it rained more.”

Aubrey Nkhoma

Video distribution. He had about 15 DVDs. He gave out all but one, and distributed videos to 15 people directly on their phones as 3gp. He burned 4 DVDs and made copies on about 11 memory cards. He charges 30 Kwacha each for the 3gp and 500 Kwacha for DVDs.

Distributed to other DJs. To 2 DJs.

Feedback. 3 people came back and said they appreciated the videos.

1. How videos changed the business. His father is an extension worker and he showed the videos to farmers. Auburn needs more videos on rice.

2. Other topics customers demand. Rice.

3. Questions from customers. How can we get other videos?

If there is hunger, a business will not do well

Mrs. Muhawa, in Smoko village, played the videos on the computer monitor in her shop and let large groups watch it. The little room seems too small for a crowd, but Ronald says that “here in Africa people can squeeze in like sardines.” Mrs. Muhawa explains that she wants to see agriculture develop. DJs can be motivated by a sense of community good.

Mrs. Muhawa (Her former employee is Thomas Mitsinde)

Video distribution. Gave the disks to 5 people, but didn’t burn them or put them on flash. People came and watched them here, men women and boys, maybe 50 people. She kept copies on her computer. She left some DVDs in her home village in Mulanje.

Distributed to other DJs. No.

Feedback. They were encouraged in terms of farming. They liked the rice videos.

1. How videos changed the business. “They just come here and watch the videos, but it is important to me to develop the agriculture of my area because if there is hunger, a village will not do well.”

2. Other topics customers demand. People didn’t know there were other topics.

3. Questions from customers. They said “Why are you showing these here? Do you want us to act on this or just watch?”

Sherriff Mustafa

Video distribution. Distributed the DVDs and videos on phones. He did not burn DVDs, but he made 6 copies for cell phones, charging 50 Kwacha each.

Distributed to other DJs. No.

Feedback. They improved their rice farming, but they were affected by floods. So it was frustrating. People were making nurseries and planting in lines, just like in the videos, and then the floods washed it away and that was frustrating for them.

1. How videos changed the business. The videos attracted the farmers’ clubs who wanted Mustafa to go out and screen it for them, but he doesn’t have the equipment to do that. He gave one farmers club 3 DVDs.

2. Other topics customers demand. Maize.

3. Questions from customers. They asked about the resources they saw in the videos, like the solar drier for chilli.

Samuel Harry

Video distribution. He gave away 13 on DVD, including some he burned. He did not put any on phones, "Because their phones are not original, their phone memory cards are not very good, not reliable." He charges 150 Kwacha, which is just the cost of the DVD. If they buy the blank DVD he burns it for free.

Distributed to other DJs. No

Feedback. People received the DVDs well and they liked them. "They were just waiting for you to come so they could give their own feedback when you came."

1. How videos changed the business. "People felt that I was a complete man with entertainment videos and agricultural videos, the complete package."

2. Other topics customers demand. Tomato, and rice; those are essential in our zone.

3. Questions from customers. They asked where can we find that type of rice that they saw in the videos (probably Nerica).

Sadik

Video distribution. He gave the videos to 11 people. He put videos on 11 phones. He put three or four videos on each phone and charged 50 Kwacha each. He did not put any on DVDs.

Distributed to other DJs. No.

Feedback. People received it well.

1. How videos changed the business. It was little, because I publicized it myself. When they came to get a movie, I would give them agricultural videos.

2. Other topics customers demand. Maize.

3. Questions from customers. No.

Moving the business home



A comfortable business, near home, is the reward for having attracted loyal customers

Boniface used to have a burning center in Jali town, but he built a house near his home a couple of km outside of town. There he installed his burning center, grocery store and a recording studio where he makes original music videos. So Boniface no longer pays rent. The new brick shop is cooler, roomier, and more comfortable than the one in town. Like all DJs, Boniface is trying to save on the rent.

Boniface must be well known, or he wouldn't have risked moving to a more remote location. The move was a success, and he has several customers who ignore us as an assistant helps the clients select their movies. Boniface is proud of the Access Agriculture videos, because now people know the shop for something more than "movies about war and fighting". The videos help to build community respect for young entrepreneurs offering entertainment and ICT services.

Boniface Mangiriza

Video distribution. He gave videos to 17 people on phones. He charges 30 Kwacha for movies, but only 20 Kwacha for the agricultural videos. He distributed 11 DVDs and charged 250 Kwacha.

Distributed to other DJs. 4.

Feedback. The videos are straightforward and most things worked out, or people could figure them out.

1. How videos changed the business. When Boniface got the DVDs he sold them on flash and memory card, which helped to bring in customers. So with the agricultural videos it was unique and it attracted people to the shop. People knew about the videos because in his old shop he put up the poster that Ronald gave him, and he displayed the DVDs.

2. Other topics customers demand. Irrigation. For the drought season

3. Questions from customers. No questions, because the videos are straightforward.

Farmers' clubs



Sell DVDs to each interested farmer and farmer club

In Zomba we drive past a group of farmers' clubs. They bring together large groups of farmers to get inputs on credit, and again later to repay the credit. This would be an excellent place to put DVDs into the calloused hands of real farmers.

Frank, Andy and T-Man

We visited these brothers in 2014. T-Man (Thokozani) was in South Africa then, but he is back now. Andy is still living at home, but is in high school, so we didn't see him. Frank and T-Man show the Access Agriculture videos in their new "show room" (video cinema). They show premier league UK football, capturing the signal on their satellite dish. They charge 100 Kwacha (about \$0.15) to see the game. Before the match starts they show the Access Agriculture videos. So there is a new way of showing learning videos.



T-Man and Frank show learning videos and football games

Frank, Andy and Thokozani Liwonde

Video distribution. Gave the videos to farmers, including 8 on the phone. 8 borrowed the DVDs. More than 20 got DVDs that the brothers burned for them. The brothers charged 150 Kwacha for the blank DVD and 50 Kwacha to burn it. On the cell phone they charged 50 Kwacha per video, and put several on each phone.

Distributed to other DJs. No

Feedback. More people are interested because they learn a lot of things, like grading rice seeds. They appreciate the videos.

1. How videos changed the business. Showing the videos before football games.

2. Other topics customers demand. Sweet potato, cabbage, tomato, millet, and sorghum.

3. Questions from customers. Why don't you have a farm to demonstrate these things? Why are you not selling these rice and chilli seeds?

A plan for chilli

T-Man introduces us to Thoko Chiduli, teacher at St. Michael's primary school. (See blog story "A hot plan" <http://www.agroinsight.com/blog/?p=1539>).

A hot plan

In his 2006 book, *The White Man's Burden*, William Easterly contrasts "planning" (which fails) and "searching" (which succeeds). He leads his readers to believe that development projects fail because they are planned. But that is like saying that the cooks spoil the soup because they light the stove. Trial and error are certainly part of agricultural change, but planning is so important that even the smallest projects start with a plan, as Ronald Udedi and I learned last



week when we visited Thako Chiduli, who teaches at St. Michael's primary school in Mpyupyu, southern Malawi. Mr. Chiduli is also a smallholder farmer.

In a previous blog I told how another Malawian farmer, Mr. Mpinda, started growing chilli after he watched videos on

this spicy fruit.

Like Mr. Mpinda, Mr. Chiduli also watched the chilli videos, several times. When I asked Mr. Chiduli what he had learned from the videos, he spoke easily for several minutes, describing the chilli videos in detail. For example, he had learned that seedbeds should only be one meter wide, so one would not step on them while working. He remembered that farmers can burn dry vegetation to control nematodes, the microscopic worms.

So when I asked Mr. Chiduli what new practices he had used in his chilli, I was a bit surprised when he said: "I don't grow chilli."

"Then why have you made such a study of the chilli videos?" I asked

"Because I am planning on growing it."

When somebody tells me about a plan for the future, I am always slightly skeptical, so I like to ask a few specific questions, to see if the plan is well-thought out or not. So I asked Mr. Chiduli how much chilli he was going to plant.

"A hectare," he said.

"A hectare?" I repeated in disbelief. A hectare is 10,000 square meters, or 2.5 acres. It is not

impossible to farm that much chilli by hand, but it would be a challenge, and too much for a first timer.

I asked if we could visit his farm.

We were soon strolling through a typical Malawian village and into a small compound, where we met Mr. Chiduli's uncle and his widowed mother, who was grinding meal with a mortar and pestle, to cook lunch on an open fire.

Below the home, Mr. Chiduli showed us a dry stream, which would be full of water when the rains came. He explained how he would plant his chilli just above the stream, so he could water his garden.



The chilli would be planted on a small wedge of land between a path and a banana patch. I paced it off and made a quick calculation. The land was about 800 square meters, a good size for a chilli garden, but much less than a hectare. I've seen other people in Malawi make similar mistakes; estimating field sizes is a specific skill. After Mr. Chiduli and I resolved this simple error we agreed that his chilli

plan was realistic.

Mr. Chiduli went on describing his plans in detail, how he would plant the variety "Dorado" and make a seedbed at the bottom of the garden, near the water, and carefully mix the soil with manure to enrich it. A month later he will transplant the chilli into rows, in the garden. It was a believable plan.

I have observed before that many farmer experiments are unplanned, such as fertilizing half of the field and then running out of manure, creating a spontaneous split plot trial. But farmer learning videos can also inspire rural people to dream of improving their incomes, and planning a complex innovation, such as starting a new crop.

Cliybert James

Video distribution. Only 3 people got DVDs. He gave them the original ones for free. He burned DVDs for two more people. They paid 200 Kwacha each. He kept a copy, but loaned it out. Four people got the rice videos on their phones for free.

Distributed to other DJs. No.

Feedback. A lot of people liked the videos a lot. They are good videos. People were surprised by the rice. They said "Can the rice mature to this stage?" (i.e. this way, this nicely, so well).

1. How videos changed the business. A lot of people are attracted to the DVDs, people who don't have phones or video players would come and say "Can you show us that video?"

Cliybert showed the videos in his shop "so many times," mostly to men.

2. Other topics customers demand. No.

3. Questions from customers. Most of them had questions, but Cliybert told them to go back and watch the video again. They asked how to apply fertilizer, and Cliybert wisely said "just watch it again and see how they are applying it."

Misses being a DJ

Yusuff Manyumba lives in the small town of Namasalima, where there were four DJs in 2014. Now, in 2016 there are six DJs. When Yusuff's computer broke down he couldn't buy a new one. He is now making a living cutting hair and charging people's cell phones, but he would like to be a DJ again. He says that burning videos is a profitable business. There are five other DJs in Namasalima, while in 2014 there were only three others.



Yusuff is now facing stiffer competition

Discussion. A DJ relies on an expensive piece of equipment.

If the DJ can't save enough money to replace the computer when it wears out, his customers will soon start to buy from one of the competitors.

Yusuff Manyumba

Video distribution. He distributed the videos on the original Access Agriculture DVDs and through the phones, but he stopped after his computer got damaged. He didn't burn any new DVDs. He gave DVDs to 5 people. 10 people got videos on their phones, for free. He also gave the video to a person who lives in Machinga.

Distributed to other DJs. No.

Feedback. While distributing the videos, the clients wondered when Ronald was going to come back. Most farmers want the videos on their phones.

1. How videos changed the business. It only changed the farmers' lives and Yusuff was happy that that they were getting information.

2. Other topics customers demand. Maize, trees which can bring back soil fertility, cassava.

3. Questions from customers. One farmer on dry land asked "How can I grow that kind of rice that I was seeing in the videos?"

Geoffrey Makawa

Video distribution. He put them on his hard disk and on people's phones and onto disks. 15 people took DVDs. 30 or more people took the videos on phones. If people bought a DVD Geoffrey charged them 250 Kwacha, and an additional 250 Kwacha to burn it. To install videos on phones he charged 100 kwacha per phone, whether the English or the Chichewa version. Some wanted the English version, because they are literate, educated.

Distributed to other DJs. No.

Feedback. When Geoffrey first got the videos a lot of people liked them. They used to come.

1. How videos changed the business. A lot of people came in. They learned about the videos from Geoffrey. When he met them on the road, he would say "if you need agricultural videos, come to get them." Others would come to his shop to get something, and he would tell them about the videos. Other customers told their friends. Some of these people became permanent customers.

2. Other topics customers demand. Maize, groundnuts, and sorghum.

3. Questions from customers. Not much. They just wanted to know when the other topics would come. (The regular supply of new products is a must for any business).

Confusing the language menu

Omar Abudu has moved his shop in Ntaja, to a slightly larger place made from a shipping container. Fortunately it is a cooler day, or the steel box would be a solar oven. A lot of the DJs are in poor locations, to save money on rent. Omar complains that the Access Agriculture videos were only in English and Chichewa, but that people here speak Yao. We say coolly that the videos were in Yao, and ask why he distributed the Chichewa versions. Omar tries to hide his shock as he picks up an Access Agriculture DVD from his shelf. The case is dusty and half open, and is filled with other DVDs. Omar blows the dust from the DVD and wipes it with his shirt. He inserts it into the computer, finds the language menu, and starts to play a chilli video in Yao.



Dusting off the DVDs to find the language menu

Omar Abudu

Video distribution. Converted the videos to 3gp and put them on people's phones. Omar gave the videos to over 30 people on their phones, for free, to encourage people to come. "It worked because we got new customers." Five people received the original DVDs.

Distributed to other DJs. No.

Feedback. The customers said that the videos were good.

1. How videos changed the business. It changed a lot. Because customers would go home and tell people they got videos at Omar's place and those people would come in. So they would buy movies and music and ask for agricultural videos as a bonus.

2. Other topics customers demand. Maize, cabbages, onions, and rape vegetables.

3. Questions from customers. A lot of people asked about chilli. The Ministry of Agriculture has been doing extension gardens, so these villages want extension gardens.

Distributed over 100 videos

John Samson distributed the videos to 109 people, by his count. The exact numbers he mentions make it seem credible that he really did give out the videos. It's hard to say why some DJs do distribute videos. Older ones are more patient, and more likely to know farmers, but younger DJs know the software better. Some DJs are more interested in agriculture, and some understand the importance of building relations with clients.



John Samson distributed videos on cell phones to at least 72 people

John Samson

Video distribution. People accepted the videos, but a lot of people don't have DVD players. Some watched on their phones. But a lot of people here don't have phones. "There were not a lot of original DVDs so I burned them for 37 people" and charged 200 kwacha. John gave videos to 72 people on cell phones at 40 kwacha per video. (John says he kept records, but his wife had the list).

Distributed to other DJs. No.

Feedback. People appreciated the videos. "In Malawi we depend on agriculture, so they were

happy to see them.”

1. How videos changed the business. “We were busy when we gave them the videos. We just help people, so things go on as normal.” A lot of people came because the shop had videos.

2. Other topics customers demand. Cassava. In this area cassava does well.

3. Questions from customers. People asked what about the cassava and sweet potato.

200 farmers

At the Mikateya Music Center, in Chiponde, the owner, Kasim Ali, began to patiently answer our questions, telling us that he gave the DVDs to eight people. Then a young man who had been sitting behind him piped up “Don’t listen to this man; he knows nothing. He is the one who owns the shop, but I work here.”

Kasim Ali smiles and says nothing. He certainly has an egalitarian relationship with his employee, Isa Ase, who then takes over the interview. Isa explains that before their



Kasim Ali (foreground) and Isa Ase (second from left)

computer broke down and the hard disk had to be reformatted, they gave the videos to at least 200 people, more than he could remember. Kasim and Isa did not keep a master copy of the DVDs. That was months ago that they erased the videos from their hard drive, but customers still ask for the DVDs.

Kasim Ali and Isa Ase

Video distribution. They used to give the videos away. They used to burn videos and put them on phones. They gave away all the original DVDs. They burned the videos for three or four months. They burned a lot for free, if the customers brought in a blank DVD, or the DJs sold the DVDs for 200 Kwacha. On their cell phones the customers took rice, and chilli. Some people said “send me all of them”.

Distributed to other DJs. No.

Feedback. A lot of people liked the videos. They were learning how to make their gardens. So they loved these stages (step by step approach of the videos). A lot of people grow rice. They used to grow it just anyhow, but now they are following instructions. They are growing a lot of rice.

1. How videos changed the business. “When people came for an entertainment video, we gave these videos as a bonus.” A lot of people appreciate the shop because they got this information from the store. Even now, people are asking for the videos.

2. Other topics customers demand. Cabbage, onions, tomato, and carrot.

3. Questions from customers. They didn’t have so many questions.

A tidy shop

In Mangochi town we meet young Charles, the brother of Keith Kwamba, who received videos from Ronald in 2015. The brothers had propped the Access Agriculture DVDs on neat shelves, on the wall, along with an impressive collection of Catholic tracts in Chichewa. None of the

other DJs sell religious literature, but many of them do display some facet of their personality. Many of them may be running their business based on personality, instead of a business plan.



Completely different approaches: Charles is quietly selling videos and religions tracts

While the competition across the street plays the music at full blast

One DJ who may be following a business plan is Madalitso, the neighbor. When Ronald met him in June, 2015, he had a small computer in a small shop next door to Charles and Keith. Now he has moved across the street into a large, red building where his employee (well stocked with computers and large amplifiers) blares music to the whole neighborhood. Madalitso was out, and the new employee didn't know anything about the DVDs.

Charles and Keith Kwamba

Video distribution. When the customers come, they ask about the DVDs because they are on display. The brothers explain that they are videos on chilli, striga, rice, and that the shop can burn a copy for the customer. On cell phones the brothers gave the customers the whole DVD, converted to 3gp. At first the brothers gave the videos for free. Then we started charging 700 Kwacha for the set or 100 per video. Many people got the videos. Charles recalls seven, but Keith gave more. They came from Namwera and other towns around here. The brothers burned some DVDs, before their computer was stolen. They bought a new one, but it doesn't have a DVD writer, so they can no longer burn DVDs, only copy onto phones.

Distributed to other DJs. None. They were going to give them to Madalitso, but Ronald already gave them to him.

Feedback. They like it and wanted other videos.

1. How videos changed the business. They attracted customers

2. Other topics customers demand. Livestock.

3. Questions from customers. They ask about pesticides, where they can find them and how. They say "the nematodes destroyed my crop. Now that I have seen it in the video, where can I get pesticides to kill the nematodes?"

Starting to grow chilli

In Chiponde, on the border with Mozambique, Stanley Juma started to grow chilli after watching the chilli videos. His chilli looked like it was doing well, but there were not many plants, considering the size of the seedbed he made. Jeff asked him what happened.

Mr. Juma explained that most of the seedlings died.

“Why?”

“Because when I made the seedbed, I forgot to make the shade of grass.”

Farmers don't always follow the video's instructions perfectly, and so making a chilli seedbed without the shade became an ad hoc experiment. There were so few chilli plants that Mr. Juma used them to fill the gaps between the tomatoes. But the chilli plants were beautiful, and Mr. Juma was well on his way to adding a new crop to his collection of vegetables.

This experienced vegetable grower learned from videos about chilli. He didn't learn perfectly well, but that combined with his first years' experience should be enough so that he could do it successfully next time.



Videos bearing fruit

Deen Studio'z

Deen Yassin in Ulongwe is a DJ who makes a business out of videos. In 2014 Deen impressed us with the commercial movie that he was making in his spare time (since released, published on DVD by Haj Music).

Deen received us politely, but it was clear that for all his business sense, he had not seen the Access Agriculture videos as a business opportunity. He gave away copies of the original DVDs, and then did nothing more.



A smart business

Deen Yassin

Video distribution. Distributed most of the DVDs, but not all. Made 2 copies. He gave them away for free and put none on phones. Last time Deen gave one away was a month or two ago
Distributed to other DJs. No.

Feedback. People appreciated them because they got help they needed.

1. How videos changed the business. No change. “When I give the videos they see me as a friend, but they don't come back again.”

2. Other topics customers demand. Maize.

3. Questions from customers. No

Silaji Fanuel

Video distribution. He distributes the DVDs to people. He was not burning them on DVDs because his computer did not have a DVD writer. On the phone he gave videos to 15 people, sold them for 25 Kwacha each

Distributed to other DJs. Gave one original DVD each to 4 burning centers.

Feedback. People liked the Chichewa and Yao versions. Especially Chichewa.

1. How videos changed the business. If he had had a DVD writer it might have changed the business more. He just bought a new computer with a reader.

2. Other topics customers demand. Maize and rice.

3. Questions from customers. None.

Yamikani, in Machinga

Video distribution. They converted videos, gave away the original DVDs and burned at least 15. They were free, but the customer had to buy a blank DVD for 200 Kwacha. The brothers gave four people videos on flash, for free.

Distributed to other DJs. One.

2. Other topics customers demand. Rice and chilli.

3. Questions from customers. No.

Cousin Dora

In Domasi Dora Saidi is the cousin of Gift Daniel, who no longer works as a DJ. Dora is tending children and selling groundnuts, packed in small bags as snacks, by the side of the shop. Dora watched all of the videos and uprooted Striga in her maize, here in Domasi. In Ntcheu, where her grandmother lives she made a chilli garden. That was the first time she had planted chilli. She harvested 35 kg. Gift showed the videos to the family on DVD.

She planted two acres of maize and harvested four and a half bags, for lack of fertilizer. In the future she plans to continue uprooting Striga and will plant chilli again. The land in Notched is good for chilli.

So sometimes DJs do share videos with their own friends and family, including some farmers. Dora, like Mr. Mpinda, started to grow chilli, which was a new crop to her. Like Mr. Sungani, she has also learned from the videos to uproot striga. That is a lot of innovation.



Dora adopted chilli and managed Striga after watching her cousin's DVDs

Joe's barber shop

In Chiradzulu, Joe Chimanya has two employees, one running the burning center and one cutting hair. Joe distributed the videos to about 100 people. We ask him why he was motivated to give out videos to so many people.

"The way you (Ronald) approached me, it inspired me. Although I am not a farmer, I saw that the videos were needed to reach farmers."

Ronald's visit of 2015, with the DVDs, had appealed to Joe's better nature: distributing a quality product that was a community service (while perhaps



Joe saw the DVDs as a chance to do something good for his community

also being allowed to make a bit of money). Joe also sought out his local extension agent, Mr. Mahala, and gave him copies of all three DVDs, because Joe thought that Mr. Mahala would be able to reach more farmers.

Joe Chimenya

Video distribution. Joe gave the DVDs to over 40 people. He would burn the DVD for 150 Kwacha and charge the 150 for the blank DVD, for a total of 300 Kwacha. On phones he gave videos to over 60 people. He converted the videos so if the customers got an entertainment video they got the agricultural video as a bonus. He sold videos to 20 people and gave them for free to about 40. He charged 30 Kwacha per video. He gave them videos that he thought they would like. With the DVD, Joe just copied the DVD whole, in all the languages.

Distributed to other DJs. To one DVD at the Tumbwe Trading Centre (and to the extension agent).

Feedback. They really liked the Chichewa version.

1. How videos changed the business. The business changed because people could tell other people that Joe had agricultural videos. New people came in and some did become regular customers. (So it was a way of retaining and attracting customers).

2. Other topics customers demand. Pigeon pea and cowpea.

3. Questions from customers. Joe told them to ask Mr. Mahala, the extension worker

His favorite class is agriculture

When we asked how many people had taken the videos on their cell phones, Ofeser Jordan said 420, which is at least twice as many as any other DJ on this study.

But, with 350 regular customers that is possible. Ofeser says he gave out videos from June 2015 until February 2016, when he went back to high school. One would only have to give away videos to two or three people a day to reach 400 customers. We ask him what motivated him to give out so many agricultural DVDs. He said that agriculture is his favorite subject in high school.



Ofeser (right) distributed more farmer learning videos than anyone else.

Ofeser Jordan

Video distribution. Ofeser distributed the videos in about 4 areas (4 villages). He reached about 420 people. 7 people got a DVD. 508 people got them on their phones. Ofeser charged 250 Kwacha to burn a DVD and on cell phone 100 Kwacha per video.

Distributed to other DJs. 3.

Feedback. People here enjoyed them.

1. How videos changed the business. They attracted many customers.

2. Other topics customers demand. Vegetable for mustard, groundnuts, and peas.

3. Questions from customers. How to harvest rice and pepper, how to store rice and tomatoes.

Hope

Hope Mzunji is a young farmer near Mulanje, a young man with a smart phone in his pocket and earphones so he can listen to music. He owns a combination barber shop and phone charging center (now closed for the blackout). He has recently started getting into agriculture, taking over more responsibility on his parent's farm.



Hope, earphones wrapped around his neck, shows us the dimba where he innovated with rice

Hope watched some of the rice videos, probably the Bangladesh ones, and some of the ones from Mali. He took the DVD to a "video show" and the owner agreed to show the videos. Hope watched the videos with the customers who happened to be there at the time, about six women and nine men. They stumbled with the menu a bit, watching some of the videos in Chichewa and some in a strange language.

They found the messages easy to understand because of the pictures. Hope never tried to watch the videos again.

People here have made rice nurseries for some time and have tried planting in lines. In 2015, Hope used a rope to plant rice in straight lines in the *dimba* (the lowland garden). That was an innovation, influenced by the videos, but Hope didn't repeat the technique in 2016 because he had no irrigation equipment.

Hope is a youth who is slightly interested in agriculture, who knows how to use a cell phone. He did one modest experiment in agriculture after making a small attempt to watch the videos.

Wisdom

Wisdom Wembere works at the Agro-Hort seed shop in Mulanje. The shop is part of a nation-wide chain. Unlike the DJs, he is more interested in agriculture, but has less experience with computers.

Wisdom has given out the original DVDs, but not made any copies. He has fielded more thoughtful questions than some of the DJs. When we ask to go see farmers, Wisdom volunteers to take us on Sunday morning, "from 8 to 11" to meet them.



Wisdom sells vegetable seed. This agro-input dealer targeted his DVDs to farmer, but did not make more copies

Witness Wembere

Video distribution. Gave the DVDs to 7 farmers. Did not convert any versions for cell phones. “I did not burn any DVDs. I don’t have a laptop, or I would have burned some.” He sold DVDs for 500, 300 or 200 Kwacha, depending on the price the farmers were willing to pay. Some of them just took them for free.

Distributed to other DJs. No.

Feedback. They were happy.

1. How videos changed the business. A lot of people came, and they tell each other about the videos. They buy vegetable seed and they say “Don’t you have a video to go along with these?”

2. Other topics customers demand. “They want more videos on vegetable and fruit. I like the one on rice, starting from the nursery. I’m thinking of practicing what I saw next season.”

3. Questions from customers. “The first one is rice. Some farmers asked about fertilizer. What kind can I apply on rice? I said CAN, because it is easy to dissolve. On chilli, they came to ask what exact month to plant. I said I didn’t know.”

Esme

Witness Wembere first took us to the home of Esme Stena, in Chambe, 20 km on the dirt road from Mulanje to Phalombe. She was buying seed in the shop when Witness gave her a Rice Advice DVD. She doesn’t have a DVD player, so she took the videos to a neighbor’s house and watched the videos there. Seven women and three men attended. Because Esme borrowed the equipment, she didn’t feel comfortable adjusting the settings, so they just put the disk in and started playing the videos in English. She didn’t understand the words, and didn’t see the language menu, but she felt that she understood a lot from the images of the first several videos.



Watching micro-dosing in Chichewa on a laptop

Esme finds the videos persuasive. “It’s one thing when people tell you to go and do something, and it’s different when you see them doing it. It’s more convincing.”

We could tell that she learned a lot by the questions she asked. “I watched the video on rice, and I saw that they apply fertilizer on rice. But how do you really apply it? Our friends in the video, they keep it in a clay pot. Does that mean we should keep our rice seed in a clay pot?”

She only watched the videos fairly recently, so she hasn’t had time to innovate with any of the ideas. Before we left, we showed her the micro-dosing video from the Fighting Striga DVD, to illustrate to her how to apply small amounts of fertilizer, and to prove that there were Chichewa versions of the videos. About ten people watch with Esme, engrossed in the video.

3. Discussion and conclusions

The DJs

The only sector that copies videos. In all of Access Agriculture's experience engaging third parties to distribute videos, many have screened videos or given away DVDs, but few have taken the trouble to burn additional copies of the DVDs or reformat them for cell phones. In that sense, the DJs of Malawi have taken a completely new strategy; the DJs do make copies of Access Agriculture videos, and distribute them.

Only a vague model. We do not have a functioning model for the DJ who does distribute learning videos successfully. Some are older, some are younger. Some of the more competent entrepreneurs distribute Access Agriculture videos, and some don't. Some are farmers or are interested in farming, but not all of them. Some of them felt that they were responding to an opportunity to spread valuable information and be of community service.

How the videos were incorporated into the DJs' businesses. Some DJs were apathetic about using the Access Agriculture videos in their businesses, including some DJs that we regarded as the most professional entrepreneurs. Some DJs realized that the videos were finely crafted and of important topics for local farmers, and distributed them as a kind of public service. This was important for some DJs who were growing tired of selling a steady stream of violent, B-grade movies. Other DJs seemed to like making a little spare change off of the farmer learning videos. After all, these are low-budget businesses. Many DJs struggle to pay \$15 or \$20 for their monthly rent. And other DJs used the videos as a way of attracting and retaining customers. Some of these DJs gave the videos as free bonus films to customers who bought movies. This attracted some new customers, as farmers shared the new videos with their friends, and told them that the videos were available from such-and-such a DJ. These new customers were typically serious farmers, a little older than the youth who buy movies. Some of these serious farmers also bought entertainment videos from the DJs. A few DJs distributed the videos to other DJs; the DJs are linked in a network that shares content with each other.

How many farmers were reached? This is difficult to estimate. Some DJs simply could not remember how many farmers they gave videos to. Our best estimate is that a typical DJ distributed the Access Agriculture videos directly to 30, 40 or 50 customers. Four DJs reached 100, 200 or 400 customers. Others were not sure but thought it was "many". We decided, arbitrarily and conservatively to count "many" as 50. By this measure, the DJs gave Access Agriculture videos to at least 2180 customers first hand. The farmers typically watch the videos with their families, and friends. The farmers often watch the videos on separate occasions, often with different neighbors and relatives. By a conservative estimate, if each farmer screened the video for 10 people, perhaps 21,800 rural people watched some Access Agriculture videos as a result of Udedi's efforts to distribute DVDs to 95 DJs in 2015.

Discussion of Hypothesis 1. The DJs distributed videos as a way of enhancing their business.

Most DJs did use the videos in their business, either as a product to sell, as a way to attract and keep customers, or as a form of community service (or all three).

Of the original 95 DJs who received DVDs, we were only able to contact 56, down from 70 who Ronald visited in 2015. This shrinkage is because many DJs leave the business to go to school, to take a new job, to migrate to Mozambique or South Africa, or to make other new starts in life. Wage labor migration to other countries has been a crucial part of the Malawian economy since the late 1800s (McCracken 2012). Some DJs were not contacted because of the blackouts which were routine during the study. The power would often be out for many hours during the day. The discouraged DJs usually closed shop and found something else to do until the power came back on.

All of the DJs distributed at least some of the original DVDs which Udedi gave them. Most distributed all of the DVDs. The better organized DJs kept one copy of each title to use as a master copy, but quite a few gave away all their copies, only to have a virus infect their hard disk, which obliged them to erase the hard disk, with the Access Agriculture videos on it.

27 DJs (50%) burned at least some DVDs. This means that they took the trouble to copy the original Access Agriculture videos onto a blank DVD for a customer. Some DVDs charged a small fee to do this, some merely charged for the blank DVD and some charged for the blank and for the copying. The total cost was always under \$1. A few DJs said that they copied the DVD for free, if the customer brought a blank DVD, because the DJ felt that it was a type of community service.

36 DJs (65%) put videos on cell phones. This required some effort. The DJ would have to copy the contents of the file onto his hard drive (a process called “ripping”). The DJs would then use software to convert the ripped contents into 3gp files which could then be placed onto customers’ cell phones via flash drives (USB sticks) or memory cards. The DJs typically sold these videos for a small fee, but these videos were mostly sold by the unit (one individual video at a time) not as a whole set.

There is a wide range in ICT talent among DJs. Some know how to shoot music videos and even movies. Others make their own posters and adverts. Some can offer other ICT services like photocopying and phone charging. Some know little more than how to rip a DVD and copy videos. Some are able to capitalize themselves by their selling goods and services and investing the money in new computers and other hardware. Others run out of working capital and migrate to other countries to earn more money when their computer wears out. With time and competition, the more business-like DJs may run the others out of business. These more successful entrepreneurs were not always the ones most interested in promoting Access Agriculture videos.

Stabilizing. As some of the businesses mature, and the DJs develop a more stable base of loyal customers, the DJs move to bigger shops, further from the main street.

Inventory. Few of the DJs are used to keeping a library or inventory of videos. Most DJs rely on a steady stream of fresh content.

2016 was a drought year in Malawi, and all of the crops suffered, especially rice. So farmers had less money to spend on luxuries like videos, and may have visited the DJs less frequently.

In spite of this, the farmers are enthusiastic about the improvements they noticed in their production after adapting some of the ideas from the farmer learning videos.

The market is getting more competitive, with more people selling hardware and videos. This may over time push out some of the more amateurish DJs.

Feel good. Some DJs experienced a boost in their self-esteem as a result of being able to distribute Access Agriculture's a high quality, educational videos. Some of the DJs seem to be getting a bit weary of pushing so many violent movies.

Project? Too many of the DJs expressed surprise when told (again) that they could sell the Access Agriculture DVDs and videos. Too many seemed to expect us to start extension programs in their area. It may be worthwhile in a next experiment to simply sell DVDs at subsidized rates, so no one will hand out videos for free and make the most of it to recover their "investments".

Some DJs expected us to come back more often and plant demonstration plots, screen videos and do some regular extension. They just assumed this. We never said anything to suggest it, but then, return visits would help to build rapport with the DJs.

Other topics demanded by customers. Customers asked the DJs if they had videos on 30 topics (see table).

Creative screening. Some of the DJs did use their creativity to find a new way of screening farmer learning videos, e.g. before a televised football game, or while customers are getting their hair cut.

More people have DVD players and TVs in 2016. This is an opportunity to distribute more farmer learning videos. In the long run, DVDs may become more important for farmers, and watching videos on cell phones will persist in areas off the grid.

DJs want videos. During the visits, many of the DJs asked for other videos. Some had lost their copies of the Access Agriculture videos, and others wanted more material. We gave some of them other copies of the DVDs, until we ran out. In the future, a program could travel a circuit through an area, distributing one DVD, and return a month later to collect data on the results of the first DVD while giving out a second title. This would keep the DJs interested, and the gradual release of titles might maintain farmer and DJ interest for longer.

Topic	How often mentioned
Maize	18
Tomatoes	12
Cabbage	9
Onions	7
Groundnuts	7
Pigeon pea	6
Rice	5
Vegetable	4
Beans	4
Sorghum	4
Sweetpotato	4
Potatoes	3
Cassava	3
They ask what other videos are available	2
Mustard	2
Cotton	2
Carrot	2
Cowpeas	2
Rape	2
Peas	2
Chickens	1
Bees	1
Chilli	1
Drought resistant crops	1
Cocoyam (taro)	1
Tobacco	1
Irrigation	1
Millet	1
Trees which can bring back soil fertility	1
Livestock	1

Some of the DJs promoted the videos. With more advertising, more farmers would seek out the videos.

Some of the DJs display the Access Agriculture posters which Ronald gave them in 2015.

The DJs have remarkably different personalities. Some decorate their shops with movie posters, others with computer art they make, one doubles as a religious bookstore, and in some the walls are completely bare.

One CBO did an excellent job targeting organized groups of farmers.

DJs invested in farmer learning videos, a bit. When a DJ converts a video to 3gp he is investing his time in the video, and is suggesting that the video is worth working with.

The DJ did keep records for us, usually names (and sometimes phone numbers) of the customers who received original DVDS. There were fewer records of farmers who received copies that the DJs themselves mad. For enhanced feedback, the DVD cover or the end credit could have a sticker with a person listed that people could call.

The DJs reported that the customers came back to them with a wide range of questions, including requests for more information.

There was even one astounding question from one person who may not have watched the video carefully, asking if parboiled rice could be used as seed? Parboiling is common in West Africa, but not in Southern Africa.

The farmers

Those farmers who received Access Agriculture videos creatively adapted the ideas from the videos. They tried new practices and even adopted whole new crops.

The study team made

three short videos to document one of these farmers' stories for each of the Access Agriculture DVDS: chilli (Mr. Mpinda <http://www.agtube.org/en/content/new-crop-mr-mpinda>),

Question	How often asked
Are there any other topics? How can we get other videos?	3
How can we control striga?	3
How do we grow that pepper? (Specific questions about chilli)	2
The Chichewa versions of the video are hard to find on the DVD	2
What type of diseases attack chilli and how can we control them?	1
Can't they make some videos on maize?	1
If we grow these crops, do you have markets for these?	1
Who are these people who brought the videos?	1
Is there a chemical to control Striga in maize?	1
What type of soil to use to grow chilli or rice?	1
Where can I get the little weeder for rice?	1
Why are you showing these here? Do you want us to act on this or just watch?	1
Where can I get the solar drier for chilli?	1
Why don't you have a farm to demonstrate these things? Why are you not selling these rice and chilli seeds?	1
How should I apply fertilizer?	1
Can you parboil rice and save it as seed?	1
Are there videos on cassava and sweet potato?	1
Where can I find pesticides for nematodes?	1
How can I harvest rice and pepper? How can I store rice and tomatoes?	1
What fertilizer can I apply on rice?	1
Can't remember, not sure, didn't specify	6
None, they didn't ask any	18

rice (Mr. Matola <http://www.agtube.org/en/content/rice-videos-phones>), and Striga (Mr. Sungani <http://www.agtube.org/en/content/roots-sungani-defeats-striga>).

We did not visit as many farmers as we had hoped to. We were busy enough trying to visit the DJs. Only some DJs could refer us to farmers, usually by phone, and most of the farmers had their phones turned off. No doubt the phones are difficult to keep charged up with the blackouts. We heard about several people who had done interesting things, like start a honey business after seeing the videos. We couldn't always visit these people.

The farmers who got the videos on cell phones tend to live farther away, in villages without electricity. They are more likely to come to the burning center on market day, the busiest day of the week, when the DJ has less time to devote to each customer. So the DJs do not know the farmers as well as clients from town.

Most farmers who watch the videos share them, or at least screen the videos with friends, neighbors and family members.

Farmers need their own copy of the videos. Most farmers who have a copy of the videos watch them several times, in order to learn more from them.

Good images. Farmers who watched the videos (for whatever reason) in English were still able to get information from them, by carefully observing the images and sometimes by asking friends or relatives to translate for them.

As we have observed before, farmers read the images in the video, paying attention to the tools in a way that other viewers may not (Bentley and Van Mele 2011). For example, several people observed the solar dryer for chilli, and the little wheeled weeder from the rice videos, and asked where they could get one.

Logical sequence. The farmers themselves recognize that Access Agriculture videos are easy to understand, because they are logically organized, so that viewers perceive the images as going step-by-step.

Videos are OK on phones. Farmers do not complain about the audio or visual quality of the videos they watch on phones. Viewers say that the sound and picture quality is good enough to understand the ideas. However, at least one farmer made the effort to watch the videos again on DVD, after watching them a first time on a cell phone; the viewing quality is actually better on DVD. Videos can be shown on some ordinary phones, but some farmers cannot watch videos on the most inexpensive phones, which are not equipped to run videos.

More TVs. Since 2014, video sales on DVD have become more important and sales of videos on phones a bit less popular. TV sets and DVDs have become cheaper.

Our friends in the videos. Several farmers referred to the smallholders in the videos as "our friends." The farmers had watched the videos enough to come to identify with the people on the videos, to even feel some affection for them. There is an emotive farmer-to-farmer connection over the videos as people recognize other farmers who are foreign and simultaneously familiar.

Sharing. Farmers who watch videos on phones probably share them with fewer people, simply because more people can watch a TV than a phone screen. While it is possible to watch a video on a phone, in a village with no electricity, charging up the phone still costs a little money and requires a trip to town, so farmers with videos on phone usually do watch the videos several times, but may not watch them as many times as a farmer with a DVD player.

Language menu. Some farmers and even a few DJs find the language menu confusing and end up watching (or distributing) videos in a language they do not speak, or at least do not prefer.

Discussion of Hypothesis 2. The farmers who watched the videos received from the DJs, without any contact from extension agents, learned valuable information and applied it creatively in their work. This hypothesis was confirmed more than we had expected. A video in the hands of the farmers allows them to learn and improve their farming, even without other outside intervention.

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