The users of Access Agriculture, an online survey



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This summary is short version of the report on Access Agriculture's online survey. To request the long version, please write to info@accessagriculture.org.



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Swiss Agency for Development and Cooperation SDC

Cover photo

Young women in Kano, Nigeria receive a certificate for participating in a practical session that incorporated ideas from an Access Agriculture video, with the Mal. Salisu Yunusa Lambu Foundation in collaboration with the Timu Impact and Empowerment Initiative (Director Atinuke Alimi in sunglasses). Photo courtesy of Salisu Muhammed Inusa

Summary

Between February and April 2021, 2,976 people from 106 countries took an online survey for Access Agriculture; 72% of the respondents were registered users of Access Agriculture. This year, as in 2018, most of the respondents (83%) work in Africa, are male (85%) and over half are under 40 years old. The respondents were extensionists (16%), farmers (13%), educators (13%) and others (13%). These are similar to our previous surveys, although this year extensionists and farmers have moved up a notch.

Respondents reached an estimated 30 million people with the videos, since 2018. Combining data from the three surveys (2015, 2018 and 2021), Access Agriculture videos reached an estimated 90 million people through small media or mass media since it started in 2012.

The respondents use the videos by watching them (53%), sharing them with farmers (64%), with youth (46%), with extensionists (44%), with students (39%), in programmes for women (30%), with broadcasters (19%), or other uses (12%). Only 12% had not used the videos. (The numbers add up to over 100% because people were allowed multiple responses).

Three-quarters of respondents downloaded the standard videos, although 43% downloaded the cell phone versions (3gp)—up from 29% in 2018. Factsheets were popular; 36% of respondents said they downloaded them. A third of respondents (33%) had downloaded publications from Access Agriculture related to the distribution, use and impact of farmer training videos. Fourteen percent downloaded audio files, up from 9% in 2018. Only 6% of users said they had not used any Access Agriculture material.

Time has improved the videos' popularity: filtering out the respondents who had not used the videos, 80% had watched more than five videos (up from two-thirds in 2018), and this year 9% had viewed 50 videos or more.

People use the videos to learn ideas to share with others (62%), to screen in rural communities (59%), to share with organisations (40%), to share on social media (34%) and to distribute on memory cards for mobile phones (16%).

Over 1,500 people shared the videos with other organisations, including 1,250 who took the trouble to write in the names of those they had shared with. The respondents to this survey shared the videos with 3,200 named organisations. This may be an underestimate. Including the home organisations of the respondents themselves, since 2018 at least 5,000 organisations have received the videos.

1 Background

In 2015, an on-line survey found that Access Agriculture's users came from research, extension, NGOs and farmers' associations (Bentley et al. 2015). Nearly one in four shared the videos with colleagues in other organisations. They reached about 750,000 people by screening the videos for small groups, in communities and in classrooms. An estimated 42 million people watched the videos on TV or listened to the audio track on the radio. Even by 2015, people were starting to watch Access Agriculture videos on tablets and cell phones. Users wanted translation into Hindi, Spanish, Arabic, Swahili, Bangla, Luganda, Portuguese and

many other languages, including local ones. Users wanted more topics, more promotion of Access Agriculture, and they said the videos should be easier to download. Then there were only 2533 registered users of Access Agriculture.

By the time of the 2018 survey, there were over 8,000 registered users on Access Agriculture. That survey (Bentley et al. 2018) showed that over 80% of the 2210 respondents were new; they started using Access Agriculture after the 2015 survey. Most of them worked in Africa, 85% were male and over half were under 40 years old. They were researchers, extensionists, educators, and farmers, in that order. The respondents in 2018 had reached another 21 million people, including six broadcasters who reached an estimated 20 million people.

Most downloaded the standard videos, although a respectable 29% downloaded the cell phone versions (3gp). Thirty-one percent of viewers downloaded factsheets and 29% downloaded publications from Access Agriculture.

Objectives of this study

In 2021, we wanted to understand if there were any changes regarding the use and sharing of quality videos on Access Agriculture. We also wanted to see how they reached women and youth in particular, and how the videos were impacting the lives of farmers.

2 Method

The survey questions were designed in English and translated to French and Spanish. The questions were pretested with selected colleagues, edited, and then entered into Survey Monkey (www.surveymonkey.com), a leading web-based questionnaire platform.

31,733 email addresses were entered (including those of 18,306 people who are registered users of Access Agriculture). They received an e-mail in English, French and Spanish inviting them to take the short survey. The note was sent over four days (4, 5, 8 and 9 February 2021). On 23 to 26 February, we send the first reminder to everyone who had not yet taken the survey. We sent the second and last reminder on 9 to 11 March. The authors also sent out the invitations via their social media connections. The survey was closed it on 6 April 2021.

The team wrote follow-up emails to some users, especially to those who needed videos in a specific language. The study team also wrote to those users who said that they reached over 10,000 people (but who did not say how many), to get a more exact number. Some respondents also agreed to be interviewed on the phone.

3 Results

3.1 Who uses Access Agriculture

3.1.1Countries

Gambia Trinidad and Tobago Argentina Southeast Asia Congo Brazzaville
République Centrafricaine Somalia Lesotho Pakistan Egypt Colombia Australia Tchad
Papua New Guinea Nepal d Ivoire Ecuador West Africa Perú Namibia
Zimbabwe Gabon Bangladesh Maroc Rwanda Uganda Kenya
Ethiopia Canada Sénégal Cambodia Côte d'Ivoire
Tunisie Burkina Faso France Mali Sri Lanka Ghana
Uganda South Bénin Philippines Kenya México
Nigeria Burundi Uganda Latin America Malawi
Sudan Cameroun Mozambique India Guatemala DRC
Nicaragua Zambia Venezuela Tanzania Indonesia Togo Asia
Bolivia Botswana South Africa Algérie Niger Côte d Madagascar
African Countries South Sudan Greece Africa Angola Haïti Germany USA
Afghanistan Liberia East Africa Sierra Leone Solomon Islands Guinée Mauritius

2335 respondents listed a country. They came from 106 countries, mainly from Africa (83%), but also from Asia-Pacific (7%), Latin America and the Caribbean (6%), Europe (1%), North America (0.5%) and 2% who work on more than one continent (Table 1).

The strongest growth is from Africa; the 83% of respondents from there is an increase from 78% in the 2018 survey, and from 63% in the 2015 survey. In absolute numbers, 1,941 of respondents hailed from Africa in 2021, much more than the 1,201 in 2018. The top seven countries represented in the 2021 survey are African. This probably reflects Access Agriculture's origins, the staff presence in Africa, the French-language interface and videos, and because many of the videos were filmed in Africa. This is a great success in reaching people in Africa, and an opportunity to strengthen ties with the Asia-Pacific and the Americas.

In 2018, Bolivia was the only country with 10 respondents from Latin America. This year, 39 people replied from Bolivia, as well as from Peru (22), Ecuador (19), Colombia (13). The 105 respondents from Latin America and the Caribbean (LAC) in 2018 were nudged up to 141 in 2021, reflecting the impact of the Spanish interface and because there are many more Spanish-language videos since 2018 (up from about 30 to over 100). There were 79 respondents from India in 2021, up from 66 in 2018. The 37 from Bangladesh in 2018 actually dropped to 36 in 2021.

Table 1. Where the respondents are based

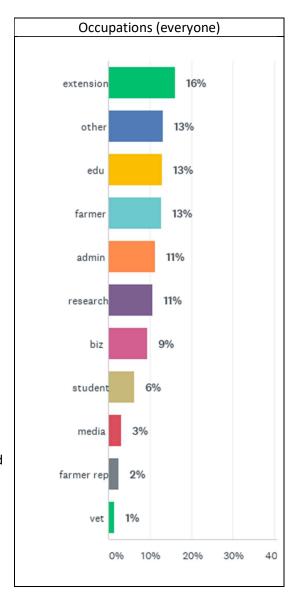
Country	Respondents	Country	Respondents	Country	Respondents
Nigeria	352	USA	12	Solomon Islands	3
Kenya	267	Congo Brazzaville	10	Trinidad and Tobago	3
Uganda	216	Argentina	9	Bahamas	2
Benin	191	The Gambia	9	Botswana	2
Malawi	90	Guinea	9	Finland	2
Ghana	85	Mauritius	9	Myanmar	2
Cameroon	82	Mexico	8	Iraq	2
India	79	Burundi	8	Italy	2
Mali	79	Philippines	8	UK	2
Burkina Faso	78	South Sudan	7	Chile	1
DRC	61	Sri Lanka	7	China	1
Côte d'Ivoire	59	Algeria	6	Comoros	1
Zambia	51	France	6	Cuba	1
Senegal	47	Mozambique	6	Dubai (UAE)	1
Tanzania	44	Cambodia	5	El Salvador	1
Ethiopia	42	Canada	5	Eswatini (Swaziland)	1
Togo	42	Guatemala	5	Fiji	1
Rwanda	40	Nicaragua	5	Guinea Bissau	1
Bolivia	39	Sudan	5	Guyana	1
Bangladesh	36	Tunisia	5	Honduras	1
South Africa	28	Venezuela	5	Iran	1
Zimbabwe	27	Angola	4	Ireland	1
Niger	23	Botswana	4	Israel	1
Peru	22	Gabon	4	Jamaica	1
Madagascar	20	Indonesia	4	Kyrgyzstan	1
Ecuador	19	Morocco	4	Mauritania	1
South Sudan	17	Namibia	4	Mayotte	1
Nepal	15	Papua New Guinea	4	Palestine	1
Chad	13	Afghanistan	3	Réunion	1
Colombia	13	Australia	3	Spain	1
Haiti	13	Belgium	3	Switzerland	1
Liberia	12	Central African Rep.	3	Thailand	1
Pakistan	12	Egypt	3	Timor-Leste	1
Sierra Leone	12	Germany	3	Uruguay	1
Somalia	12	Greece	3	Vanuatu	1
		Lesotho	3		

3.1.2 Occupations

In 2018, people checked off as many as four occupations, so this year we only allowed people to select one. They were extensionists, other, educators, farmers, administrators, researchers, business people, students, media, farmers' reps and animal care givers in that order. In 2018, researchers and extensionists held the top two slots, so by 2021 researchers have fallen far down the list.

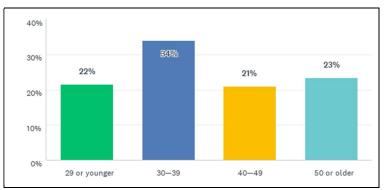
Educators find the videos useful in class and they have basic computer skills and equipment. It may also help that many universities have free Wi-Fi.

The "others" include people who work for NGOs or farmer organisations, i.e. they could have been included as extensionists or farmer reps, but there were also some ICT experts, an economist, a librarian, a miner, a footballer, a soldier, and one who raises rabbits as a hobby. A fellow in Greece identified as "Not professional but working hard on the land," and a woman from Mali said she was a plant health inspector in a vegetable seed laboratory, engaging researchers to work with women and youth, to encourage chemical-free agriculture.



3.1.3 Age and gender

Over half (56%) of the users are under 40, a slight increase since 2018 (when 52% were under 40). Only 16% of the people who completed the survey were women, just as in 2018, even though Access Agriculture has made a big effort to hire female members of staff, to feature



female farmers in the videos, and to host videos on topics that appeal to women (such as vegetables and small livestock). According to the African Union Commission (2021) young African men (ages 15 to 29) are more likely than young women to have access to mobile phones (86% vs 77%) and Internet (44% vs 30%). Women may also have less money for airtime, or have less time to search for information.

3.2 Using the videos

3.2.1 Using the videos

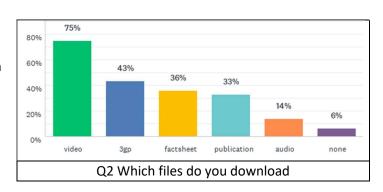
Most video users share videos with farmers (64%), watch them themselves (53%), share them with youth (46%), with extension (44%), with students (39%), and in programmes with women (30%). Nineteen percent shared the videos with broadcasters, or broadcast them themselves. Some of the comments people shared:

WhatsApp groups for farmers. Tshibangu Mputu Derrick, a farmer in the DR Congo who is also with the Associations des Agriculteurs Sans Frontières (A.A.S.F)/RDC writes that the videos teach him different techniques of animal husbandry and agriculture, which he shares "with all people of all ages in the village where my activities are located - And I put the links in our farmers' WhatsApp group."

Motivational. Eduardo Lucas Vieito Reyes, a researcher and extensionist with the Centro de Investigaciones para el Mejoramiento Animal de la Ganadería Tropical (CIMAGT) in Cuba has shared with over 100 farmers, "I use them for motivation in meetings with male and female farmers."

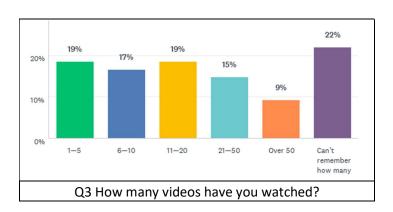
3.2.2 The products users access

As always, videos are the first choice of files to download, but this year there was an increase in mobile (3gp) files accessed, from 29% to 43%, consistent with the growing importance of cell phones. The other products, factsheets, publications and audio all increased a bit over 2018.



3.2.3 Watching videos

In 2018, about 30% of respondents said they watched one to five videos. This year, the modal viewer watched 11 to 20 videos. Nine percent have watched over 50 and 22% can't remember. These responses suggest that users are watching more videos than in previous years.

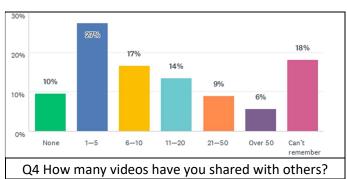


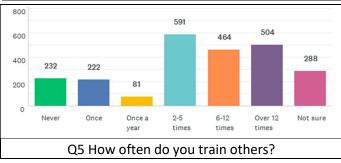
3.2.4 How many videos are shared with others

Ninety percent of users who have seen at least one video have also shared them. Some people share a lot (6% shared over 50 videos and 18% have lost track).

3.2.5 How often videos are used to train others

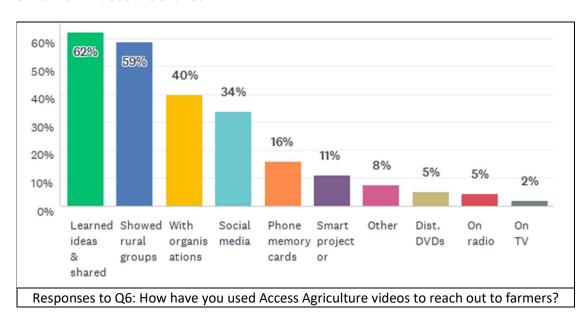
Question 5 asked: How often do you use Access Agriculture videos or audio tracks to train others? The modal response was 2 to 5 times a year, followed closely by the hundreds of respondents who train others over 12 times a year. That means that 504 people share





videos every month. 90% of the respondents use the videos to train other people.

3.2.6 How videos are shared



The respondents are learning ideas and sharing them with others, screening videos to groups in rural communities, sharing with organisations. A third share on social media and 16% transfer videos onto memory cards for cell phones. For the question "How have you used Access Agriculture videos to reach out to farmers?" there was an option to write in an answer. There were some innovations:

Teaching how to teach. Abdullahi Maigarabi teaches extension at Bayero University, Kano, Nigeria. He uses the videos to teach tomorrow's extension agents how to teach farmers.

Burning DVDs. Uma Apollo of Kilimo Trust has reached 20,000 Ugandan farmers with videos in the Luganda, Kiswahili, Runyakitara, and Luo languages. "After downloading videos, I burn them on a DVD and besides sharing with millers and companies dealing with farmers, I share with village agents both hard and soft copies for them to burn more in case they run out of the hard copies."

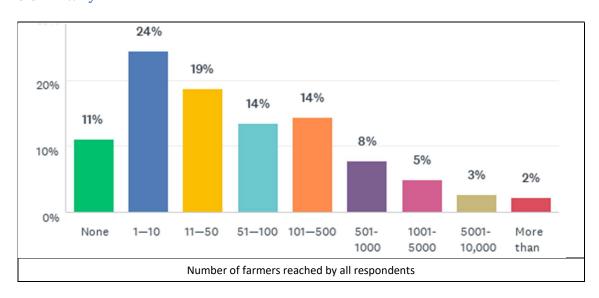
Newspaper. Judith Lungu at Royal Monze Institute, Zambia, writes newspaper articles on the videos.

Buying equipment to show videos. Josephine Ng'ang'a of the NGO Research, Community and Organization Development Associates (RECODA) in Tanzania "Use a projector to share with farmers. We have bought phones, soon we will use memory cards to share them."

Beating Covid. Amis Delu, an extensionist with CARE/Uganda reached over 1,000 farmers with videos in Runyakitara. "Share videos to community based trainers working with our farmer groups on WhatsApp. This has been extremely useful in helping us train farmers over the COVID lockdown period."

3.3 Number of farmers reached

3.3.1 A tally



As in 2018, this year many people reached fewer than ten farmers. 18% of the respondents reached over 500 people. Between 2018 and 2021, Access Agriculture reached over 30 million farmers (Table 2).

Table 2. Total number of farmers reached with Access Agriculture videos or audios

People trained	Median value	Responses	Farmers reached
None	0	244	0
1 to 10	5	539	2,695
11 to 50	30	415	12,450
51 to 100	75	300	22,500
101 to 500	300	318	95,400
501 to 1,000	750	173	129,750
1001 to 5,000	3,000	110	330,000
5,001 to 10,000	7,500	61	457,500
Sub-total			1,050,295
10,000 +		50	29,459,340
Total			30,509,635

Most farmers were reached by the 10,000 Club, people who share videos with over 10,000 others, often through media. Still, a million people were reached by smaller programmes. This is encouraging since (after 2018) Access Agriculture did not have the kind of large support programmes from CGIAR centres that counted for the largest numbers in previous surveys. Combining the one million reached through smaller distribution efforts from this survey with similar data from 2015 and 2018, since 2012 (when Access Agriculture started) at least 4 million farmers have viewed videos, e.g. in village screenings, or distributed on DVD or on mobile. These people may have had higher quality experiences than those who saw the videos on TV or heard a soundtrack over the radio.

This year we asked respondents only to give us figures for 2018 to 2021. Through its partners and users, Access Agriculture reached more farmers from 2018 to 2021 (30 million) than in 2018 (21 million). Combining data from the 2015, 2018 and 2021 surveys, at least **90 million** farmers were reached through Access Agriculture videos, through small media or mass media.

3.3.2 The 10,000 club

In some cases, there was missing data: respondents said they reached over 10,000, but did not say how many. The authors contacted them by email, WhatsApp and by phone to discuss how they had reached so many people (see boxes 1, 2 and 3).

Box 1. Staying grounded while on the air in Ghana

Since 2010 Gideon Kwame Sarkodie Osei at ADARS FM, a commercial station in Kintampo, a town in central Ghana, has been part of an effort by Farm Radio International (FRI) that supported radio stations in Ghana. With encouragement from FRI, Gideon started a weekly magazine show for farmers, where he plays Access Agriculture audio tracks. The magazine, Akuafo Mo, means "Thank You Farmers" in the Twi language.

The show starts with recorded interviews, where farmers explain their own knowledge of a certain topic, like aflatoxin. After the interviews, Gideon plays an audio track, to share fresh ideas with his audience. Gideon has played a lot more than 50 audios.

Gideon plays a portion of the audio in English, and then he stops to translate that part into Twi, the language of the Ashanti people. Every week there is a guest on the show, an extension agent who can discuss the topic and take questions from listeners who call in.

Gideon's experience with the magazine inspired him to start listener groups, in coordination with FRI. Gideon visits at least some of the groups every week. Because of these visits, Gideon is now downloading videos as well as audio files from the Access Agriculture platform. "Sometimes I see if they have electricity, and I rent a projector, to show them the video they have heard on

Gideon is also a trainer for FRI. Before Covid, he would travel to other towns and cities in Ghana, meet other broadcasters, and go to the field with them to show

the air." Gideon says.



them how to improve their interview skills and to craft their own magazine show. Now he continues to train broadcasters, but online.

Working with the farmer listening groups gives Gideon insights into farmers' needs and knowledge, making his magazine so authentic that 60,000 people tune in. That experience gives Gideon the confidence to train other broadcasters all over Ghana.

An earlier version of this story appeared as an Access Agriculture blog <u>Staying grounded</u> while on the air in Ghana

Box 2. Ceto Farmers Club in Borno State

In troubled Borno State, Nigeria, three years ago young Atsacha Ishaku and some of his colleagues founded the Ceto Farmers' Club, with three groups: one on fish, one on beef and another for poultry eggs, with about 100 members between the three groups.

"We are based in Nigeria, and we sell our products in Niger, Chad, and Cameroon. We also work with farmers there," Ishaku explains.

In the meetings with farmers we talk about "How they can use modern tools. How to engage in modern farming. Also we show them how they can use machines on their farms. I like videos because you can see it with your eyes and you can also do it on the farm. We display the video in front of them when they come for meetings. We show them step by step, for example the different seeds they can use."

Box 3. A Greener Revolution in Africa

After settling in the USA in the 1990s, Isaac Zama would visit his native Cameroon almost every year, until war broke out in late 2016. About that time a new satellite TV company, the Southern Cameroons Broadcasting Corporation (SCBC), was formed to broadcast news and information in English. In 2018, Isaac approached SCBC to start a TV programme to help Cameroonians who could no longer work as a result of the war, and the thousands of refugees in Nigeria. With his PhD in agriculture and rural development from the University of Wisconsin-Madison, Isaac was well placed to find content that farmers back home would appreciate. "I did some research on the Internet, and I found Access Agriculture," said Isaac. "I liked it so much that I watched every single video."



Isaac's TV programme, Amba Farmers' Voice, is broadcast live from his studio in Virginia, every Sunday. He introduces each video in West African Pidgin, then plays it in English, and adds comments in Pidgin. Two to three million people watch Amba Farmers' Voice in Cameroon, besides many others in Nigeria, Ghana, Sierra Leone and even in some Francophone countries, like Benin and Gabon. Some farmers reciprocate, sending Isaac pictures and videos about their own experiments.

People in refugee camps watched the video on sack mounds, showing how to grow vegetables in a large, soil-filled bag. But gunny sacks were scarce in the camp, so people improvised, filling plastic bags with earth and growing tomatoes in them. After seeing the video from Benin on feeding giant African snails, one young man set up a snail pen with a stack of used tires. He feeds the snails banana peels and other fruit and vegetable waste.

People also adapted solar dryers, based on the videos. To save money, they made the dryers from bamboo, instead of wood, and shared one between several families. As a further adaptation, people are drying grass in the solar dryer. "People think that Africans don't have cell phones," Isaac says, "but 30% of the older farmers in villages have android phones."



Dr Isaac Zama says, "Those videos from Access Agriculture will revolutionize agriculture in Africa in two or three years, if our national leaders would just broadcast them on TV."

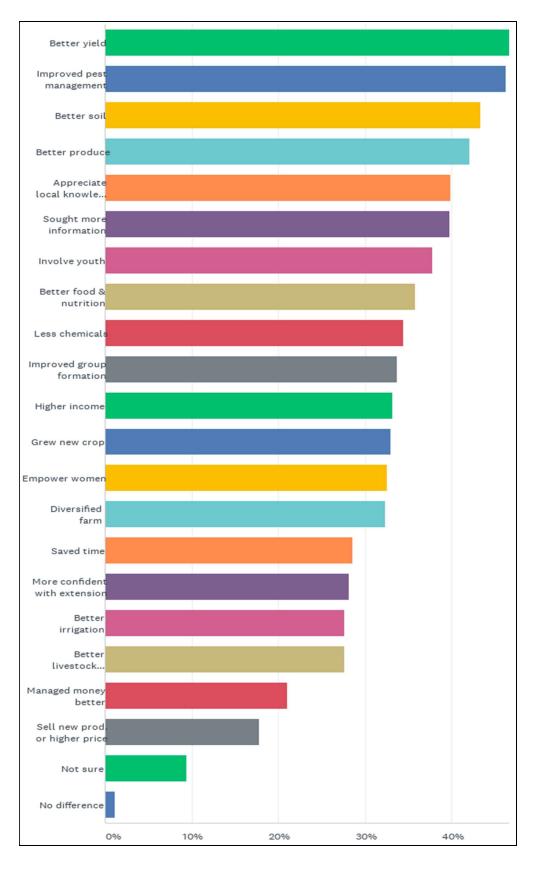
An earlier version of this story appeared as an Agro-Insight blog <u>A Greener Revolution in Africa</u>.

3.3.3 Impact on rural communities

The survey asked how the videos had made a difference in farm families' lives. The responses were randomised so that each respondent saw the choices in a different order, to avoid biasing the first few possible responses. The top response, "better yield" garnered almost 50% of the responses (more than one answer was allowed). This suggests that providing information on agroecology and organic agriculture (as AA does) can improve farmers' yields, an idea that is currently debated.

The next most frequent answers all support the notion that the videos promote productive agriculture. "Improved pests, disease and weed management", "better soil health and soil fertility", and "better produce" were all noted by over 40% of respondents.

Other answers suggest that Access Agriculture videos help to improve the social life of farming and the health of farmers and consumers. Ninety percent of respondents were aware of at least one benefit farmers got from watching the videos. Only 9% were not sure and only 1% said that the videos made no difference in viewers' lives.



3.3.4 Impact on women's groups

Respondents who share videos with women tend to be young (57% are under 40, including 17% under 30), but most of them are men (83%), suggesting that videos are reaching women farmers through male extensionists. The people who share videos with women's group are also active; 34% share videos over 12 times per year, vs just 21% for the respondents as a whole. In response to Q1 (how do you use videos), a few people left specific comments about women.

Improving women's lives. Wilingtone Okelo, a researcher at the Kenya Agricultural & Livestock Research Organisation (KALRO) in Kisumu shared the videos with over 50 farmers over 12 times a year. He clarified that "In summary Access Agriculture targeted agric. development through youth and women empowerment in return to reduce food shortages (Food insecurity), reduction of idleness etc."

Generating employment for female youth. Subash Biswas with ASD-Bangladesh (Association for Sustainable Development in Bangladesh) shares videos with adolescent girls (who dropped out of schools) to motivate them to start income.generating activities. He has shared over 12 times a year with 100-500 young farmers.

In an email, Subash wrote that he has started using the videos in Bangla and to promote vermicomposting among resource poor farmers in south-west rural Bangladesh. See Box 4.

Box 4. Teaching earthworm entrepreneurs during a pandemic.

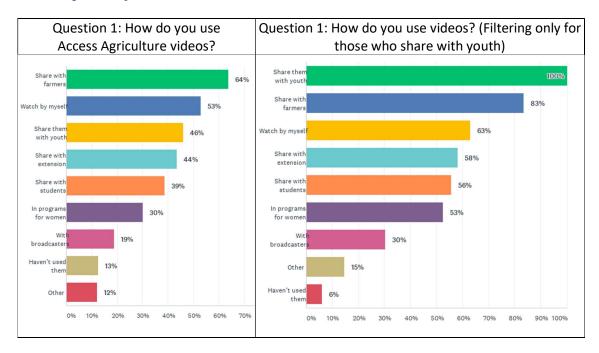
Ahmad Salahuddin rang up Mr. Biswas for a follow up interview. Biswas has a diploma in agriculture. He began working with agriculture in 2014-15 and now reaches about 500 farm families, mainly providing training and entrepreneurial support on vermiculture and vegetable growing in Sadar Upazila, Magura. He also helps to mediate between the entrepreneurs and livestock owners, who sell cow dung to the entrepreneurs. The NGO has seven employees and 10-12 non-paid volunteers. Subash started using Access Agriculture videos in March 2020 at the start of Covid. He found the video summaries on YouTube, but then learned to download the full-length videos from the Access Agriculture platform.

An NGO for women and youth. NIAGA Ruben, president of the NGO OASPA in Benin has reached between 1,000 and 5,000 farmers, by sharing videos over 12 times a year with women's associations, youth associations, farmers, market gardeners.

For women's cooperatives. Abdullateef Olaosebikan, an entrepreneur with NaFarm Foods in Nigeria says "I download the videos and share with women cooperatives society in food processing, on their phones so that they view them to learn." He has shared over 50 videos, reached over 1,000 farmers and has also shared the videos with 11 organisations.

Groups for young mothers. Kodjo Hilaire in Benin has shared over 50 videos with over 1,000 people, to train young mothers who are beneficiaries of the JARDALIM project ["integrated home gardens" of the NGO CEBEDES-XUDODO.

3.3.5 Impact on youth



Filtering only for those who share with youth, we see that they were much more likely to share with farmers, with extension people, in programmes for women and even with broadcasters.

Respondents who share videos with youth tend to be young themselves (61% are under 40, including 24% under 30). The people who share videos with youth are extension people (19%), farmers (14%), other (12%) and business people (11%). Only 11% are educators, suggesting that the youth being reached are young farmers, and not just students. One educator who took our survey is Alejandro Bonifacio, in Bolivia (Box 5).

Box 5. Teaching the farmers of tomorrow with videos

Professor Alejandro Bonifacio is from the Altiplano, the high plains of Bolivia. Bonifacio has a PhD in plant breeding, and besides directing an agricultural research station, he teaches plant breeding at the public university in La Paz (Universidad Mayor de San Andrés).

This year about 20% of his students are still living on the farm, and taking their classes online. Another 50% are the children or grandchildren of farmers, but live in the city. Many of these agronomy students might take over their parents' farm, if not for a couple of problems.

One is the lack of rural services. Dr Bonifacio told me that even when the youth do go home, they don't want to farm like their parents did. The youngsters want to



use small, affordable machinery, and do less pick and shovel work. Young farmers also want to exploit emerging markets for differentiated produce, such as pesticide-free food. Fortunately, there are videos on appropriate technologies. Every year, Bonifacio organizes a forum for students on plant breeding and crop disease. He assigns them three videos to

watch, to discuss later in the forum. One of his favourites is <u>Growing lupine without disease</u>, which shows some organic methods for keeping the crop healthy.

Many young people who study agriculture at university would return to farming, if they had appropriate technology for family farming, and services like electricity and high-speed internet.

An earlier version of this story was published as an Agro Insight blog <u>Teaching the farmers of tomorrow with videos</u>.

Comments from respondents about youth

Youth and students. Patricia Jimena Medina Herrera, an educator at INTE in Bolivia uses the videos to help rural students conduct their thesis research.

Youth to youth. In Benin, SAVI Ulrich, wrote that he studied food processing and agriculture, but that he is working in delivery. He doesn't belong to an organisation, but his friends often ask him for advice, because of his education. He used the videos to help his friends, and himself, to learn to prepare poultry feed.

Students in computer labs. Nicola Turing at the Turing Trust (UK) writes "We recently came across these videos and are using them to support school students in Malawi studying Agriculture for their Malawi Certificate of Secondary Education (MCSE). We do this through our projects to set up computer labs in schools and use Kolibri as a learning management platform to align resources to the curriculum."

Teaching tomorrow's extension people. Access Agriculture's former PhD student Zoundji C. Gérard at the Université Nationale d'Agriculture in Benin uses videos at least every other month with extension students.

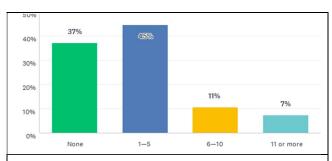
Getting youth interested. Mustapha Saidu, a young student in Nigeria: "I really appreciate the programme, because I build and sustain my interest in the field of agriculture. Thank you."

Farmer and agricultural student at Egerton University, Dennis Kiprono in Kenya says "Helps me to improve on my mechanization in farm. Also to improve my techniques in farming."

3.4 Sharing with organisations

3.4.1 How many organisations

Most respondents share the videos. Two thirds of the people who answered this question (63%) shared the videos institutionally, including 7% who reached out to 11 agencies or more. Many people (1,538) shared videos with other organisations.



Replies to Q11 "How many organisations have you shared Access Agriculture videos with?" The modal answer was 1-5, but 7% shared with over 11 organisations

3.4.2 Which organisations

For the question "Could you please list the organisations you have shared Access Agriculture videos with?" 1,250 people wrote in an answer. A few organisations were mentioned more than once, but the vast majority were mentioned only once. We counted almost 5,000 organisations reached (4,927). This includes respondent's own organisation, and the others they shared with. This is probably an undercount, because several respondents said they shared with many other organisations, too many to write down. The list of organisations is available from info@accessagriculture.org.

Some comments from respondents

2,500 farmer cooperatives. FOFANA Eddy Noumakan, the ICT person with the Agence Nationale d'appui au Développement Rural (DFD-ANADER) in Côte d'Ivoire shared the videos within his agency which works with universities and more than 2500 cooperatives.

3.5 Suggestions for improving the videos and the platform

This was an optional question, and about two-thirds (1,697) typed in an answer.

Keep up the good work. About a third (591) said they had nothing to add, or that they hadn't watched the videos yet, but many left glowing comments about how Access Agriculture should keep up the good work.

Easier download. Fifty-five people (3% of those who left comments) said that the video files were too big, and that they should be easier to download.

Publicity. Many (245) suggested improving the publicity, to make Access Agriculture better known (e.g. through social media, TV or radio. Others suggested reaching out to farmers through extension people, schools, universities, farmers' associations, other organisations.

3.5.1 Topics requested

236 people asked for more videos and more topics (mostly, they just want more videos). The respondents suggested 67 topics (Table 3).

The top suggestions were marketing, pest management, livestock, soil management, and machinery (and tools), specifically for:

- farming mechanization
- efficient use of machines in agriculture
- how to build machines to transform farm produce
- small machines for conservation agriculture
- choosing and acquiring, especially small machinery and using it in groups
- hand walking tractors with accessories
- how to make and repair simple farm tools
- · schematic drawing of equipment

Access Agriculture already hosts videos for all of the topics that were mentioned more than once (Table 3, first column), suggesting that the existing videos do meet a demand from users.

Table 3. Topics suggested

Topic	Users	Topic	Users
Marketing	13	Access to land	1
Pests (incl. organic pesticides)	12	Bamboo	1
Livestock, incl. dairy	11	Bitter gourd	1
Machinery and tools	11	Cash crops	1
Soil (fertility, cons.) incl. compost	11	Cassava	1
Climate change	7	Certification	1
Finance	7	Cocoa	1
Vegetable growing	7	Coffee and tea	1
Value chains	6	Cotton	1
Agribusiness	5	CSA (community-supported agric.)	1
Post-harvest storage, incl. pests	5	Drones	1
Value addition	5	Drying (how to dry crops)	1
Food and nutrition	4	Ergonomics	1
Poultry	4	Extension	1
Urban or peri-urban farming	4	Farm integration for sustainability	1
Agroforestry	3	FFS method	1
Aquaculture	3	Gender	1
Emerging pests (FAW etc.)	3	Grasscutters	1
Youth, videos for	3	Green manures	1
Animal feed	2	Integrated watershed management	1
Beekeeping	2	Microorganisms in piggeries	1
Biogas	2	Moringa	1
Cereals	2	Mushrooms (button)	1
Co-ops & farmer organisations	2	Mycotoxins	1
Disease (of crops) management	2	One health	1
Fruit and fruit trees	2	Onions	1
Hydroponics	2	Permaculture	1
Quails	2	Plantains and bananas	1
Use of agricultural waste	2	Potatoes	1
Women, videos for 2		Production of cosmetics	1
-		River restoration	1
-		Spice farming	1
		Storage pests	1
		Sugar cane	1
-		Vermiculture	1
-		Water harvesting	1
		Yield studies	1

3.5.2 Technical suggestions for improving the platform

245 people suggested ways to improve the platform. A few suggested features that Access Agriculture already has, e.g. 11 people suggested hosting written material, besides videos.

Twenty people asked Access Agriculture to create an app, to make the videos easier to view and share. This is coming soon. Fourteen people suggested making it easier to search for a video.

Eight people had ideas for saving airtime, so farmers-users could save money while viewing or downloading videos, e.g. some wanted versions of the website that can be used off-line.

24 people asked to receive updates, either weekly or whenever new videos are posted, so they can follow new material on the website. (There is now a monthly newsletter, Access Agriculture Panorama: https://www.accessagriculture.org/newsletter). Thirteen people suggested ways to increase feedback from users, such as online meetings where users can exchange views, or quizzes for users, which Access Agriculture has used.

3.5.3 Make the videos over again in each country

Very few people suggested that Access Agriculture should make videos in each country, just 14 out of nearly 3,000. Although extensionists or media may criticise Access Agriculture for not making videos over again in each country, people who know the site do not make this nagging point. Neither are farmers the ones complaining about this.

3.6 Using the language versions of the videos

As in 2018, 45% said they were unaware that the videos were in other languages besides English, French and Spanish. This number was even higher for the farmers (55%), who are the ones most likely to speak local languages. Access Agriculture is gradually changing video titles and descriptions into local languages, to make it easier to search for them.

1109 people typed in the names of the languages they use on the platform. The languages used correlate with the languages posted, e.g. English and French topped the list, as always. Swahili (or Kiswahili) and Fon make a strong showing (Table 4). Some people left comments, explaining how they use the language versions. For example, Oumar Coulibaly in Burkina Faso used French, and Dioula versions with farmers, but also watched some in Mooré, just to improve his Mooré. Abdoulaye Diakite of ADRA in Mali used videos in French, English, Bambara and Bomu. He doesn't speak Bomu, but showed the videos in villages that do. When videos are in many languages, extensionists can review videos in languages they know, and screen them in another language. At least four people added subtitles and possibly voice overs of their own. Others did simultaneous translations.

Arabic, Bangla and Hindi were not reported as much as the authors had expected. Access Agriculture has many videos in those languages, but relatively few of the people who watched them took the survey. Access Agriculture knows from Google analytics that many people from Arab and South Asian countries watch the videos, but they may not have registered or downloaded videos, so few may have been reached through this survey.

Some respondents reported using videos in languages which are not hosted on Access Agriculture. This may be because: 1. These are languages people want; 2. The users may have translated these videos themselves (digitally or simultaneously); or 3. A few may have remembered incorrectly, thinking of videos sourced elsewhere.

Table 4. Languages used

Language	Users	No. of videos on the Access Agriculture video platform	Language	Users	No. of videos on the Access Agriculture video platform
English	464	215	Lingala	2	4
French	346	214	Lugbara	2	9
Kiswahili (Swahili)	113	122	Malagasy	2	0
Spanish	60	105	Malinke	2	0
Fon	51	54	Pidgin	2	0
Bambara	42	132	Runyankole (Nkore)	2	0
Chichewa	39	116	Sena	2	15
Hausa	36	55	Soninké	2	0
Luganda	32	74	Thai	2	3
Luo	29	33	Urdu	2	14
Mooré	23	41	Yao	2	14
Yoruba	23	41	Afo	1	0
Dioula	22	29	Angas	1	0
Peuhl	20	66	Baatonu	1	0
Arabic	19	138	Baoulé	1	7
Bangla (Bengali)	16	94	Berba	1	1
Hindi	16	49	Bomu	1	9
Bariba	15	31	Ditammari	1	5
Ateso	13	44	Ebira	1	0
Ewe	13	18	Efik	1	0
Kikuyu	13	45	Embu	1	0
Kinyarwanda	13	38	Gourmantche	1	7
Wolof	11	62	Higgi	1	0
Dendi	8	19	Hoba	1	0
Runyakitara	8	9	Idoma	1	0
Amharic	7	12	Ifè	1	1
Quechua	7	8	Igala	1	0
Tamil	7	24	Indonesian	1	1
Bemba	6	36	Jukun	1	0
Dagbani	6	19	Kannada	1	0
Kabyé	6	12	Kanuri	1	0
Kalenjin	6	6	Karamojong	1	0
Mina	6	6	Kassem	1	0
Nago	6	9	Kiembu	1	2
Portuguese	6	27	Kiganda	1	0
Aymara	5	8	Kikamba	1	0
Dagaare	5	13	Kilega	1	0
Luhya	5	5	Kimeru	1	0
Mandinka	5	0	Komkomba	1	0
Tumbuka	5	73	Krio	1	1
Twi	5	39	Lao	1	3
Dholuo	4	19		1	0
	4	23	Lomwé	1	0
Marathi	4		Maasai		0
Tonga (Chitonga)		58	Mampruli	1	
Igbo Khmor	3	0	Mende	1	0
Khmer			Moar		
Kisii	3	0	Moba	1	6
Nepali	_	10	Okun	1	0
Telegu	3	10	Persian (Farsi)	1	21
Zarma	3	13	Punjabi	1	0
Adja	2	3	Shi	1	0
Buli	2	11	Sisaala	1	13
Gonja	2	11	Songhai	1	0
Grune	2	0	Temne	1	0
Kusaal	2	19	Tiv	1	0

4 Conclusions and recommendations

Between 2018 and 2021, Access Agriculture reached over 30 million farmers and at least 5,000 organisations.

Conclusions

Countries. The respondents work in 106 countries, mostly (83%) in Africa, which is more than in previous Access Agriculture surveys. The popularity in Africa may be due in part to Access Agriculture's staff on the continent. Having all the videos in English and in French is also helpful in Africa. There has been some growth in absolute numbers of respondents from Latin America and India, but not from Bangladesh.

Occupations. The respondents tend to be extensionists, educators and farmers. Far fewer respondents are from media.

Youth. High school and university students are an important audience for Access Agriculture, making up 6% of the respondents. Many more of these youngsters are reached by other respondents, 39% of whom share videos with students.

The survey respondents are reasonably young (most below 40 years-old), and 85% are male. They are actively engaged in reaching youth and women. Using a digital platform is easy for these youth, and young farmers are often entering niche markets that may include organic or agroecological produce (see Bentley et al. 2019, Van Mele 2021).

Formats. Videos are the most popular format to download (75%), but so are 3gp files (43%) and factsheets (36%).

How many videos people watch. The respondents watch a lot of videos (modal response is 11-20 videos) and they often use videos to train farmers (504 respondents share the videos monthly).

Using the videos. Learning ideas from the videos and sharing the ideas is popular; 62% do that, a bit more than the 59% who screen the videos.

How many have seen the videos. From 2018 to 2021, over a million people were reached in relatively small efforts, a few hundred or a few thousand at a time. Over 29 million farmers were reached by large-scale efforts (mostly by media).

From 2012 to 2021, over 90 million people have seen the videos, of which 4 million through group screenings, DVD or mobile.

Impact. The main impacts on farmers were better yield, improved pest management, better soil conservation/soil fertility, better produce, more diverse farm enterpises, as well as enhanced appreciation of local knowledge, women empowerment and youth engagement in agriculture. 90% of respondents thought that the videos make a difference in farmers' lives.

Women. The people who reach organised groups of women farmers tend to be young, male extension agents who are frequent users of Access Agriculture.

Organisations reached. Two-thirds of the respondents shared the videos institutionally, including 11% who shared with six to ten organisations, and 7% who shared with over 11. They named 5,000 organisations (between their own and others), but this is surely an undercount.

Languages. Use of videos in each language is in proportion to the videos available in that language. Translate the videos, and an audience will come. The top five languages used were English, French, Kiswahili, Spanish and Fon, in that order. There is demand for further translations. Respondents suggested 80 languages for future translations.

More videos. Most asked Access Agriculture to just keep posting new videos. Marketing (and related topics), machinery, pest management, livestock, and soil-and-water management were the top suggestions.

A winning style. Access Agriculture may also reflect on what no one said. In their comments, none of the respondents said that Access Agriculture should make videos based around dramas or comedies. The users all like Access Agriculture's realistic style, in which farmers speak from the heart, and show their work in their own fields, gardens and homes.

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