



**Scaling the Uptake of Agricultural Innovations:
The role of sustainable extension and advisory
services**

Q & A Transcript

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Moderator: Great. Thank you so, so much, Paul and Brent. Um, as you can see, we've had really outstanding contributions in the chat box, lots of comments and resources and questions flying by. I've done my best to collect all of the questions that you all have posted, um, and will ask a few of them now. Please feel free to continue to post questions in the chat box, and we'll get to as many as we can, uh, before our ending time at 11:00. Uh, if there are any questions that we aren't able to get to, we are, uh, collecting and keeping the transcript from the chat box, and, um, we will look through them after the fact and, uh, figure out the best way to get answers and responses to you, be it, um, via _____ in some fashion. So, um, all of your questions are definitely valued.

All right. So looking back through, uh, these many questions, I thought, just a very quick clarifying question, uh, that came in from, uh, Christiano Roffianoli from the Department of Veterinary Science at the University of Pisa in Italy, um, I thought it would be good to quickly clarify, is innovation only technological? Are there other kinds? And are you measuring agricultural development only in terms of productivity?

Paul: Right. Uh, this is Paul, and Brent will I'm sure want to add, um, some to this. Um, innovation is not only technology, in the sense of it's not only about new agricultural practices on the farm, seeds, chemicals, IPM adoption, these type of things. It also could be around, um, organizational forms, like farmer organization. You know, even farmer groups can be an innovation in many places, if they don't have a history of that type of thing, or building trust in farmer groups to the level that the group can actually have the capacity to do business together, or to, um, support, um, maybe better water management, or natural resource management in a zone. Those are other types of innovations that extension commonly supports and works with.

Brent: Yeah. Just to – to – to chime in, I mean, I – and innovation is anything that's new, um, to the people who are potentially using it. So you can cast that out in any direction that you choose. How we measure things, uh, the second part of the question, yeah, we – we tend to focus on yields. Um, we could have focused on something else. We could focus on changes in soil fertility levels if the innovation is regards to building up soil organic matter. Uh, we could look at farm or – or individual, uh, firm profitability.

So it really depends at what level you set your, um, your – your – your measures, or establish your measures, and we can do that at any level. Right now, we tend to be focusing on – on productivity

levels, because of the concern over food – food security, both locally, nationally, sub-regionally, and worldwide. Uh, there are some huge challenges there, but there are certainly links to those lower levels. And, um, you know, ultimately farmers may not, uh, adopt innovations, um, if they aren't getting the returns that they can – they see from doing other things. So we have to look at also the connections, being able to sustain practices, and also the returns to different actors within any type of agricultural system.

Moderator:

Great. Thank you. And, uh, we had a question come in from Amanda Fong, joining us from USAID Mozambique. And that question is regarding the rates of uptake, do we have a best guess of uptake of new ag technologies in Africa, given the increasingly fast uptake times of all sorts of technologies in our very interconnected world? Uh, given access to mobile phones, for example, and the impact this has on creating the linkages faster, it seems somewhat outdated to expect diffusion to take 40 years, like the two examples discussed.

Brent:

Yeah. I'm going to – I'm going to start off, uh, with this question. I mean, that's – that's a great question, and that's partly why I started out, uh, trying to identify the unique nature of agriculture. And there was the danger in a couple of my slides, focusing on the, uh, uptake curves of different technologies that tend to be electronics and tend to be, uh, measures of uptake within affluent populations.

Um, there's a huge difference between the purchase of a cell phone and the adoption of a new crop or the integration of a new field level management practice into a farming system on which people, uh, survive for their livelihood. Uh, the relative cost and the risks are completely different. To get a cell phone, you need to have, uh, the money. The risk I suppose is if you lose it, or if you're in a country where you have to sign a multi-year contract, uh, you may not be able to pay it.

The risk of adapting a – a technology in a farming system, much more complex. It's often not just a thing, but it also has interconnections with everything else. Changing a variety often requires changes in a lot of other management practices. So there's a cost factor of acquiring the seed. There's a cost factor in making all the other adjustments or providing the other types of management changes that are required for that seed to perform. And people are much more cautious about that, because the downside risks are that maybe you aren't able to feed your family.

Maybe you're not able to have any resources to put your, uh, children into school, pay for medical bills, and other things.

So, uh, you know, when we start talking about scale, scalability, rates of adoption, we need to be very, very mindful about the unique nature of agriculture and the populations that we're talking about. You know, people who are, uh, just below, right at, or just above the poverty line in their different contexts, and the risks of, uh, changes to their primary, uh, stream of revenue and also, uh, household food security.

Moderator: All right. Thank you. Uh, that was a very helpful response. Um, all right. And, uh, if either of you happen to have noticed anything in the chat box that you particularly wanted to respond to, uh, please feel free to jump in and let me know, but otherwise I'll keep moving through, uh, some of the questions that we have already received. Um, and this one –

[Crosstalk]

Moderator: Oh, go ahead.

Paul: There was a question from, um, Christine Hoffer about scale from a communications perspective.

Moderator: Yes.

Paul: And I – I think, um, communications perspective is extremely valuable, um, in thinking about agriculture extension at scale. Um, a couple of points I wanted to make about that, and Brent might have some comments about it also. One is that in communications, we can think about, um, broadcasting and narrowcasting. I think our colleagues from Access to Agriculture have made that point before. Um, and – and the point is that in broadcasting, you're going to reach thousands, maybe millions of people with information about a technology, but oftentimes to actually help people think through the new technology or the innovation that, um, you want them to consider, you need to narrowcast. You need to, um, engage with them more closely, um, at a smaller level.

And also, much extension with audiences, where people are, um, especially smallholder farmers in say sub-Saharan African, um, does involve that last mile problem in extension, which is face to face interaction with groups. It's quite hard to get around that in, um, in any innovation process. So, um, in our communications perspective, just make sure that we're not thinking about mass

media communications approaches, but also, um, communications at the face to face level, and, uh, with farmers in the field, oftentimes farmers with very limited literacy levels, which means demonstration and, uh, other forms of communications are extremely important, beyond just pamphlets, um, and those kinds of things.

Brent:

Yeah. So very good. I just wanted to remind people, I mean, uh, different types of mass media are good for those, uh, initial awareness creation, right? And if you think back to one of my slides where there were the, you know, Rogerian, uh, kind of five steps of the innovation process: awareness, interest, evaluation, trial, or trial-ability, adaptation perhaps, and then adoption.

So you – you can make the, um, innovation, whatever it is, make people aware of it. You can stimulate them – them thinking about whether they're interested in that particular, uh, innovation, depending on the kind of information that's communicated. You may also be able to facilitate their internal self-evaluation of whether that, uh, innovation is of sufficient interest and might fit into their objectives and their farming systems, again, depending upon the type of information that's communicated.

Beyond that, though, uh, broad – what Paul said, talked about the broad kind of, uh, band, uh, communication ____, are not very effective. It's very difficult to use mass media to help people facilitate their trial and their adaptation of a particular innovation to better fit their local context, as well as trying to supply all the other, uh, types of resources or other changes that might be necessary to allow a specific, uh, innovation to really, uh, demonstrate its utility.

Um, so I think, you know, again, it's not either/or. It's beginning to mix, and using different things or the purposes that they're most successful, uh, at – at, uh, providing inputs on. So, you know, again, looking at different kinds of media, different types of contacts, to help people through different stages in the adoption process.

And it will be very dependent upon the type of technology we're talking about. Highly complex, high level – technology with high levels of risk and other, uh, attributes associated with them may not be amenable to generalized SMS push messages or, uh, radio spots or whatever. They may require much more nuanced and detailed types of interaction or information that that media is not very good at providing. So again, you have to look at the

characteristics of the technology, and then again, the media of communication, medium of communication, and how best to, uh, use that in – in facilitating the adoption process.

Moderator:

Uh, thank you, Brent and Paul. And, uh, Christine, I would also suggest looking back at our last two Ag Sector Councils from September and October. Um, in September, we talked about social media use as a tool for agricultural development, and also, um, in October, during our other scaling webinar, um, Sarah Bottinger I think answered a very similar question about, uh, communication. So, um, those are both posted on Agrilinks, and, uh, should be good resources.

All right. Uh, looking at a couple more questions that came in, uh, Steven Franzell from the World Agroforestry Center asked how do you foster joint learning and feedback mechanisms in scaling up initiatives, particularly involving small farmers, for ensuring that their feedback is incorporated into modifying interventions and extension approaches?

Brent:

This is a great question, right? We've been working on this for *[laughter]* 30 years. Um, I mean, this – this is as much a research question and an institutional question of research organizations and extension advisory services. Uh, uh, you know, it's not just a methods issue. We know how to engage farmers individually, in groups, different sizes, to begin to experiment with trial, provide feedback on different types of innovative practices or technologies. There's no mystery there.

Where things tend to break down, though, is whether that method is really incorporated in anyone's, uh, day to day job descriptions or activities, and then what happens with that information. Is that – does that every go anywhere? Is it aggregated? Is it communicated back to researchers, research teams, uh, for further modification of technologies, uh, changes, or addition of new research questions to help modify, uh, or develop a second iteration of the technology that better fits local contexts, or slightly different contexts? I mean, that's I think more where the breakdown occurs.

There's a shocking – through our ___ studies, there – I come across a shocking number of countries where there's a breakdown, complete breakdown, between research and extension. This is one of the things, as much as people like to hammer on TMV as a top down, uh, non-responsive approach to extension, um, service delivery, one of the things it did extremely well was help to

regularize, normalize relationships between research and extension. There were biweekly meetings. There were, you know, annual review meetings, etcetera, etcetera, etceteras.

And so, uh, researchers knew exactly what was happening within the extension programs, and, uh, extensionists knew exactly and could communicate exactly what their experiences were in the field back to researchers. Uh, with the moving on from TMV, we really lost that, and I – like I said, there's a shocking number of cases, when you ask a direct – national director of – of research what's being extended, he has no idea. He has no idea. Or if you look at it from the extension service standpoint, they don't have a formal, regularized communication or contact with research.

Uh, and the problem's even worse when you begin to look at NGOs' projects in the private sector. There are some even harder divisions there. There's some actual animosities that need to be overcome.

So I don't think it's a – it's a lack of knowing how, uh, in terms of methodologies, but it's, uh, it's on a more institutional side where I think we really fall short on that.

Moderator:

All right. Uh, a question came in from John Russell with Eco Food Systems in Bend, Oregon. And he asks, um, most donor funded projects have limited outcome targets. Uh, for example, X number of farmers reached, X dollars of increased income. How does the open-ended need to, quote, consider the potential for scaling from the very beginning get beyond this project-imposed, time-bound limitation?

Brent:

Well, I'll need to take a first stab at that. I mean, I – you know, you have to look at the project cycles, right? Three to five year project funding cycles correspond to what? Do they link up well with human behavior that we know in terms of time required to adopt? Does it link up well with institutional change processes that may be required?

And I will apologize to Steve, because I didn't answer his questions. He asked how do we, and let me try to sneak in an answer to Steve's question as well, with a lot of times we have to engage in processes of institutional change in order to provide, uh, new types, particularly non-technical sources of innovations, new credit systems, _____ focus on organizational capacity building, support for business development support, market, uh, based research, things that traditionally research and extension programs

have not focused on. They often require a lot of internal institutional reform, working with new partners on new topics.

Uh, and so you have to ask the question, come back to the donor side, whether it's a – a five year national, uh, planning cycle, or whether it is, uh, the typical blueprint that's used by, uh, different donor resources. It doesn't really match up with what we're trying to achieve in the real world. And I think there's some real learning and reform, some honest, internal reflection that needs to go on, and some reform that needs to take place, in order for the different contributors to really contribute to processes that will reach their ultimate desires.

I mean, people want to have maximal impact for their investment dollars or – or euros. So we have to become flexible on all, uh, ranges, not just harmer – hammer harder on the contractors to deliver more quickly and cheaper, but also begin to look at let's give people time at all levels to begin to realize some of the benefits that different options, opportunities naturally are able to deliver to smallholder farmers.

Moderator:

All right. Um, thank you very much. Um, let's see. Looking through all of these great questions, we only have time for a couple more, uh, but we'll do our best to, uh, to follow up and make sure that you have the chance to see all the questions that came in. Um, I thought this one was interesting, from Paul Van Mell, from Access to Agriculture, based in Kenya, but working across developing countries. Uh, he asks, crops are grown across borders, and often, farmers face a similar problems. Hence, mechanisms from going to scale need to stimulate learning to adapt new ideas to local contexts, which is best done farmer to farmer.

I think the crux of the question is what examples are you aware of that take the farmer to farmer learning to a wider geographical and temporal scale, perhaps across borders?

Brent:

Hmm. Well, I – it's – Paul will probably want to say – I – I'll jump in because, uh, actually we're working with, uh, Dee Franzella, World Agriforestry Center, on a study of farmer to farmer extension, uh, and we found some very interesting things. Um, you know, farmer to farmer extension models have been kind of adopted as the de facto methodology by many, if not the majority of NGOs' water projects, and in a couple of instances, national programs.

Take the case of – of Malawi. The use of lead farmers promoting farmer to farmer extension is their national strategy. Now how do we begin to facilitate cross-border learning? I think that's at the real – that's going to be a real challenge. And this may be some of the – an area where, uh, some sub-regional platforms, uh, through GFROS and, uh, their sub-regional platforms can begin to provide a facilitating role. There may be some donors that would be able to engage, uh, different practitioners from different countries to come together to share lessons.

At the farmer level, that – you know, it's – that may be insurmountable. Um, and you also may need to ask the question, is it really relevant? Taking the policy structure, for example, uh, from neighboring countries, it may be so different that things that are available or as an option to farmers in one country are not available as an option in farmers in a neighboring country, just due to policy constraints.

Conversely, you know, some of the more, uh, farm-related or production-related technology practices may actually have a – a capacity to – to disseminate across borders. And, you know, we've had a lot of the regional and sub-regional dare to share fairs and some other practices in the past that have been pretty successful. And that's why I personally like to go to conferences. I learn a tremendous amount from the local fairs and the posters.

Um, but how can we bring that down to a lower level? I think, Paul, you probably know as well as any of us, uh, about some of the things that have worked and have not worked. Um, I'll stop there and let Paul _____.

Paul: Um, so I want to make sure I'm clear on the question here. I – um, the question is about, uh – Brent, restate the question if you could, please.

Brent: Well, uh, and – and Paul, you can – the other Paul can – in the chat can remind us if we're off track, but I was – I understood the question to be how can we facilitate, uh, farmer learning and farmer to farmer exchange processes, uh, at a larger scale, not just within communities or districts or even perhaps even a country, but how can we, um, elevate these practices, and also some of the content that is, uh, generated through these exchanges ___ larger scales, and more farmers can _____ be engaged in communications and movement of information _____.

Paul:

And – and Paul by asking his question is sort of, um, at least raising a couple of ideas. One is the groups like Access to Agriculture, Digital Green, and others, that are, you know, using ___ approaches, um, allowing farmers to teach other through video and sharing that very widely. Thousands and thousands of farmers could see the experience of a successful, um, rice farmer, if it's recorded on DVD. So, uh, Farm Radio and others, um, that amplifies that experience very well.

Um, I also think broader using the farmer input back into the – the extension programming at a national level and at a regional and district level in many countries, is one way that farmers can benefit other farmers, maybe not as directly in a teaching mode, but in, uh, influencing the program mode by, um, showing what's working and what's not working through that farmer experience and through farmer voice and political input, um, is – is another part of that.

Moderator:

All right. Thank you very much, Paul and Brent. Uh, if you have time for one last question, uh, I thought I would ask one from Jerry Brown with FuseNet in DC. Uh, as extension is an important component to most crop/livestock value chains, how do you envision extension collaborating with post-farm gate links in commodity value chains? A discussion around this will make production-oriented extension a – a more dynamic actor along the entire value chain.

Brent:

Yeah. Well, I – I – I mean, that's been a – an issue of concern, uh, for a number of reasons. I think just the whole, uh, value chain phase of development through which we're going currently has placed this question before us very directly. Um, I would ask you, for example, to go to the MEAS webpage. I – we have a number of, uh, lesson learned case studies, and I authored the first one from Senegal that I think demonstrates this very clearly.

Uh, when you begin to look at value chain development, and particularly, um, post – post-field, post-farm production, issues of aggregation, triage, quality, labeling, uh, negotiating _____, ___ of credit, sales, transport, all this sort of stuff, um, at least in this context, uh – and – but I think there's some lessons that – that spill over elsewhere, extension can play the most valuable role in acting as the initial facilitator, getting people, groups, who need – who have a definite interest in working together, getting them together for the first time, and helping them to come to normalized communications and agreements.

But, and I must underline this, but not inserting themselves as a key mediator. Right? So that they are not, uh, uh, a person who receives information or volumes of product from one group and turns around and passes that information or goods onto another, wherein they became a – they become a critical link in the whole process, such that if they disappear or don't perform that service, the whole chain breaks down. Uh, that's called inserting oneself in the value chain, and that seems not to work very well.

But it does work very well when extension provides, uh, a facilitating ser – uh, service, and helping links to form, in the case of farmer organizations, but helping those links to attach to other necessary links in a vibrant, growing value chain, because then everyone – all those separate links are acting under their own self-interest. They have a definite reason for being at the table. They want – they have some objectives they're trying to achieve, and they're willing to negotiation and work with others that have similar but separate interests in being at that table.

And – and helping to bring those people together and work through some problems is a really important thing, and no one else will do it. Okay? Now this is a hugely, uh, valuable role that particularly a public sector extension service can play. No one else will – will do it. Uh, and there are some paid service provider models, but they're very nascent, uh, that – that do provide these same kind of facilitating services. It may – might well work well in a highly commercialized, uh, uh, commodity markets.

But in this case, an example, uh, you know, we were producing millet and sorghum, coarse grains, uh, hugely profitable for everyone involved, high levels of vested interest, and the extension played the exactly perfect role in sitting off to the side, but enabling actors to coalesce around areas of self and shared interest.

Paul:

This is Paul. I would say that, um, the post-harvest, like Brent mentioned, can be one of the most important, um, arenas for extension activity, and one of the challenges is that so many extension programs focus solely on production, often only solely of, um, major grain crops, and they don't focus enough on market access, um, post-harvest value added in terms of processing, the capacity to link with actors further down the market, um, chain, the value chain.

And also pre-production. In some places, extension can play a facilitating role in helping people get access to land or water resources, um, that is not a production question in a field, but it's

helping people get a field or get an area to do their activities, a fish pond, whatever. Um, and in that way thinking about extension more broadly with the pre – the access to resources, and also post-harvest, dimensions, marketing, um, group business activities, those kinds of things. It's extremely important.

One of the problems is many of our extension personnel are essentially, um, trained in crops, or trained in a very specific technical field, and they need assistance and further training in some of these process and market-oriented, um, dimensions of programming.

Moderator:

Thank you so much, Paul and Brent. Well, we've reached the end of our time today. Uh, this has been, uh, a really rich presentation. Thank you very much for, uh, all of the details that you provided, and for answering as many questions as we could squeeze in in our time. Um, as I've mentioned previously, we'll be sending out resources to everyone who attended the webinar today, uh, including a recording of this webinar, and kind of a distilled, uh, piece from the chat box, and so many great resources were shared. And also, the, uh, the PowerPoint presentation and items like that.

Uh, before you go, if you haven't had a chance, please take the short survey that you'll see, uh, at the bottom of the chat box right now, and also designated by survey link in our links pod at the bottom of the page. This just helps us, uh, keep track, and, uh, keep trying to improve our Ag Sector Council events for you. And, uh, I guess that will wrap things up for today. We really, really appreciate all of your participation, and especially, uh, Brent, Paul, and Suzanne, for your contribution. So thank you very much.

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