Increasing Resilience Through Improved On-Farm Storage

Q&A Transcript

January 21, 2016

Julie MacCartee: This is a question about the evaluation, so it's directed at Betsy. From your surveys, were you getting different responses from farmers depending on the agro-ecological zone in which they live or work? And that's from James Berry.

Betsy Ness-Edelstein: Yeah, a little bit. One thing that we're focusing on particularly is just disaggregating everything by the two regions. So far, we see in eastern, awareness is pretty high. I think we've seen 16 or 17 percent of farmers say that they're aware of at least one of the improved technologies that may be a participant in the Ag Results pilot. And Rift Valley, it seems a little bit lower at this point, but the farmers there are just as interested if not more so. I think they tend to be a little bit larger in their land holding than are producing more maize. So we've seen a little bit of difference between the two regions, but I would say overall – and they do grow slightly different things.

In eastern, I think we've seen people growing more crops that can be stored, so there's a little bit more diversity. These guys can also hold beans, green grams, things like that. So we see farmers that might be interested in using the bags for – or these technologies for more than just maize, maybe a little bit more so in eastern. This is also something we're going to look at closely as we talk about the pilot going forward.

Julie MacCartee: Thank you. I'd also like to remind everyone that Tulika is on the line from Abt who has been working with Ag Results for quite some time and is an expert in this project. So we thought we'd throw a question out to you, Tulika. So a question came in from Jennifer Bremmer. What about strategic behavior by farmers preferring to wait for another donor funded NGO to provide free or low cost equipment rather than buying them in the present, and then another NGO shows up next week, and maybe they don't feel – they feel a little bit stupid for having jumped the gun. That's just a complex situation, and we were wondering how AgResults is dealing with that complicated scenario. Do you want to try unmuting yourself, Tulika, and addressing that question?

Tulika Narayan: Yeah, sure. First of all, hello everybody, and really nice to see such a big crowd and so many questions and answers, and thanks for that question, Jennifer. It's interesting that you raise the point about strategic behavior. I think that's possible. I think farmers may, depending on their proximity to existing, NGO programs may make those decisions, but the hope is that because we are using AgResults as you can apply the _____ approach, there will be a much larger scale penetration. The idea is that by making private sector compete, you'll be able to push out technology to many retail markets. So essentially, we'll be able to capture smallholders who are not being touched by those programs. And that point also goes to another question that was aimed in the chat room about what happens and how does this all play out in the context of the subsidies. So yeah, there'll be some interact with the subsidies, but the hope is that the field is much larger. But I did want to say since you mentioned the word strategic behavior that in these core mechanisms, we are watching out for strategic

behavior between the implementers that are incentivized vis-à-vis the smallholder.

In Kenya, fortunately, the incentives are designed in such a way that there is no specific strategic behavior on the private sector spot that affect develop an impact, but in other pilots, sometimes they can be strategic behaviors that can limit the complete development impact. And we're watching that, that's a very interesting piece that we will be looking at.

Julie MacCartee: Is the initiative focusing on or encouraging more local private sector actors or external actors? Are they also equally encouraged to participate?

Aviva Kutnick: Yeah, so this approach that we're focusing on is very technologically agnostic. So just promoting all different types of technologies that exist that can be adapted for smallholder farmers, and also the creation of new technologies. We're really focusing on developing what exists, but also creating something that will help smallholder farmers. So just bringing in large corporations that are producing this, and also smaller innovators that can enter the market with these new innovations. Just to mention some of the storage containers that are being – the technologies that are being used, there's the hermetically sealed storage bags, which are multi-layered, sealable bags that can store up to 90 kilograms and have a shelf life of three years, plastic tanks that are durable and affordable and airtight and are capable of storing more than 100 kilograms of maize, and then metal silos, which are the largest of the three.

And they're sealable silos that recently have been adapted for smallholder farmers and have the capacity of up to 500 kilograms of maize. There is another bag that has been created that is also hermetically sealed and infused with pesticides. This has been approved by the pesticide board in Kenya, however, it has not been entered in the pilot yet through an implementer.

Julie MacCartee: Great, and since you were mentioning hermetic storage bags, we had a couple people discussing those on the webinar. So there was a question from Anthony Cazingua. How much will the farmer have to invest in these hermetic liner bags? Will they not be too expensive for the smallholder farmer? Will this not lead to dependency syndrome? I hear that some cost benefit analysis have been done for PICS bags, and so I was hoping you could just discuss a little bit more of these concerns about them being a little bit too expensive or – yeah.

Aviva Kutnick: Yeah, thanks for that question. It is really interesting to see how farmers react to the prices and understand based on that what do they really value. So a lot of farmers don't even necessarily pay for the bags that they currently use. A lot of them are repurposing fertilizer or seed bags and using those to store their maize, or they're buying just regular polypropylene bags that cost them 50 shillings or less. Like I said, the cheapest of the new technologies is at least 200 to 300 shillings, so that's a significant increase in cost. The most expensive on the metal silo side goes up to tens of thousands of shillings.

The metal silos come in different sizes, and they have different prices based on that, but there's a wide range of prices, but you're right, they are definitely more expensive than what farmers are used to. In some cases, the entire investment for a year for the entire season for a farmer in their inputs is only 1,000 or 2,000 shillings. So if you think about the cost of the bags relative to what they're used to spending, it's a good question. And if we go back to what farmers are saying they value in terms of these bags, they're not necessarily thinking about them to store grain that they're going to sell.

They think of selling maize right off the bat as soon as they harvest and dry it so that they can get the cash income right away, and then they keep the grain for storage in these hermetic bags or metal silos. That's what they're telling us they're most interested in. So we know and they know that these bags are going to reduce post-harvest losses, but they need to figure out how much that is worth to them. So there's going to have to be sort of an attitude shift away from, "Oh, post-harvest losses are sort of the natural way of things." Some people say it's nature taking its part. People don't necessarily know how much they lose, it happens little by little, so they have to weigh those things against the cost of the bag or the technology, and we'll see.

The pesticide issue is also an interesting one. So pesticides have a cost, obviously, but it's not on the order of the price of the technologies. And so it's up to the farmers to decide what they think the trade off is between the health benefit of not using pesticides versus the cost of the technology. We're definitely going to do a cost effectiveness analysis and look at how this plays out.

Julie MacCartee: Interesting, I'm glad you addressed the pesticide because a couple of our participants were discussing those, and that is a complicated issue as well, so it's good to hear that side. The evaluation will address pesticide uses as well. All right, Tulika, we thought we'd ask another question to you. This is a question from Elon Gilbert, and it is does the pilot design that Betsy was describing include impacts on changes in who does the storage? Is the hypothesis that the use of these technologies will mean that farmers store more or store longer than others. In other words, store longer than middle actors in the value chain such as aggregator, traders, et cetera?

I know you addressed this a little bit in the chat box, but we'd love for you to pull it out verbally as well.

Tulika Narayan: Thanks for that question. It's a really interesting question because it actually adds a new dimension to the way we were looking at it. So we are certainly looking at, as Betsy explained, what's going to happen to smallholder _____ decisions when they're selling it, what the _____ timing is. And as she noted, I mean our initial hypothesis is that it may not move that quickly because the decisions on _____ are based on the constraints that they face and school fees that they have to pay and so forth. So from the large sample survey, we will be

getting these estimates on the smallholders on how long they're storing and what's happening.

On the side of the remaining part of the value chain on who is storing the traders and how is it moving, we will be capturing it through the structure _____ performance approach, which is assessing the impact of pilot on the market. So potentially what has happened to the market for the _____ technologies. And I think your point actually helps us address the _____ how long they're storing and getting that perspective from the _____. So that's actually a really interesting point, and a good way to look at some of the findings that we will connect from our various surveys with quantity driven qualitative.

Julie MacCartee: Thank you, Tulika. That was a very helpful answer. And there have been a couple questions about Aflatoxin, and I know that we couldn't dig into Aflatoxin deeply today in this particular webinar, but it is an issue that Feed the Future is looking at very intently right now, and doing a great job I think of addressing. We have a number of Aflatoxin related projects. So we'll post another link to some Aflatoxin related resources that are up on Agrilinks in the chat box, and we're hoping to have another webinar sometime this year or some additional content on Aflatoxin to highlight for all of you. But it is absolutely one of the main issues we're trying to prevent with all of this on-farm storage.

Just because we had a lot of discussion in the chat box on the issue of rats and rodent infestation, we just thought we'd toss it out to our presenters. Kind of what is that interplay with rats? Can they bore through the bags that are in question, the picks bags? How can grain be stored so that rats can't destroy it? Are insects or rats a bigger concern?

Aviva Kutnick: In terms of insects versus rats, I think probably you'd have to ask each individual farmer for their take and their particular storage setup. Yeah, rats are definitely an important issue, and we know that with some exceptions, the metal silos do protect against rats, but rats can bore through a big if they want to. What we've heard is they can't necessarily smell the grain inside the bag unless it's opened. So if the rat doesn’t know it's in there, sometimes they won't get into it. But yeah, metal rat guards are a completely separate investment for a farmer to make, and it's a good investment for them to put those metal rat guards at the bottom of their granary. Some of them also invest in cats.

But the hermetic bags in particular are not rat proof at all.

Parasto Hamed: I mean there's always creative ways to get around rat infestation. It is a major problem that farmers face, and some farmers try to alleviate that problem by storing the bags in their home, which is not a foolproof method, as rats can get into many places. But it is something that farmers are facing, and unfortunately, the hermetically sealed bags do not overcome that problem. But over time, when farmers are able to invest in better technologies, like the plastic tanks, it is a way to overcome that problem.

Julie MacCartee: Very interesting. Thank you. So we're coming up on the end of our webinar today. Before we wrap up, please take a moment to take the poll that you see on your screen. They definitely help us shape and improve these webinars for the future, so we always appreciate your input. Or you're always welcome to put your input in the chat box, or e-mail me, JMacCartee@USAID.gov, or Agrilinks@Agrilinks.org to share your comments and suggestions for future webinars. Based on what you've seen in the chat box, kind of the questions and concerns that people have, or just where you see the Ag Results project heading in the future, do you have any final comments from the evaluation?

Tulika Narayan: Yeah, I mean there's lots of interesting things to say about pull mechanisms, but just hearing a bit from the chat room, I just wanted to respond to a few comments. I think Bob made a comment about how are we going to have the private sector have demonstrations, logs, or assign the earlier adopters, and that is such a challenge, and will the private sector really take it. And I think that what they're finding is by _____ at the end, which is properly priced, we can let the creative juices run, and they're seeing a lot of partnerships by the private sectors to work with entities that know how to market to smallholders.

So that is the exciting part of it that you're not figuring out as a donor, what's the best way to reach the smallholder, but you're saying that, look, private sector, you're good at marketing and selling things. And can you solve the problem of marketing and selling to the smallholder. And so the things to watch out there is well, will that approach of creating the market, engaging the private sector reach all the smallholders or not. And as we mentioned in our lessons learned, there is a trade off. There's a trade off potentially in achieving – creating a market and achieving scale and reaching all the smallholders, but it will eventually get to that. And perhaps to also address the point about what about this subsidy, what about this _____, maybe those need to be focused specifically on the poorest of the poor, the entities that cannot be easily engaged with the private sector led approach.

So that nice coordination between a pull and push strategy to get to our development goals would possibly be the best way to do it. The other thing that I wanted to just add to all the folks that joined today, all the Ag Results pilots are, as the name suggests, on agriculture, and the assessment that we'd be doing across the pilots is also very interesting, and the idea of the price design, the price itself, should we link directly to reaching the smallholder or not is another thing we are watching. Like in Kenya, _____ that are rewarded are the ones that need to purchase by smallholders. But there are pilots where that link is not directly made, but the idea is that if the market is created, a smallholder will be touched, and you know, when you create price design where you're making price dependent on smallholder engagement, it does increase the verification cost leading to greater cost of the pilot and reduced cost effectiveness.

So that balance again is very interesting to watch out for, and so watch the space as we generate more lessons learned from the evaluation team on this very interesting pilot.

Julie MacCartee: Wonderful, thank you, Tulika. So with that, we're going to go ahead and wrap up. I would like to extend a sincere thank you to Aviva, Parasto, and Betsy, and especially Tulika also for joining remotely. And Rodrigo who has been answering some questions in the chat box, and Bob Rabatsky also for our first response. We've had just a great ____ of speakers today, so thank all of you very much for your participation. All right, we're going to wrap up. Have a wonderful Thursday, a great weekend, and if you're in DC –