



AG SECTOR COUNCIL | DISCUSSION SERIES

# CREATING POLICIES FOR SCALING SMALLHOLDER ACCESS TO QUALITY SEED

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AUDIO TRANSCRIPT

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## PRESENTERS

Mark Huisenga, USAID/BFS  
Pradeep Prabhala, Monitor Deloitte  
Charlee Doom, USAID East Africa

## PRESENTATION

*Julie MacCartee:*

We have three speakers today. The first two kick us off and set the stage for what Feed the Future is doing on feed systems is Mark Huisenga a senior program manager in the USAID Bureau for Food Security working the Feed the Future program. I shall click on over to his bio. Or if you wouldn't mind just click one slide over. And his beautiful picture as well. He manages the Scaling Seeds and Technologies Partnership, conducts investment due diligence in modeling and analyses commercial, legal, and institutional reforms for Ag development.

He's also researched approaches to breeder and foundation seed production by US states and was a key contributor to the early generation food study which you'll learn more about today.

Next up will be Pradeep Prabhala a senior manager with Monitor Deloitte. He leads their work in agriculture and food security in emerging markets and has worked extensively across Sub-Saharan Africa, South Asia, Southeast Asia, and the Middle East. He has led Monitor Deloitte's work with USAID on Feed the Future private sector action plans and has supported governments across Africa and Asia on transforming Ag sectors through inclusive private investments.

He also worked extensively in fertilizer and seed systems. And so he'll be talking about early generation seed market archetypes in Sub-Saharan Africa.

And then joining us from Kenya – you'll hear her voice a bit later – is Charlee Doom who will be discussing East Africa trade harmonization efforts for seed. And she's an Ag foreign surface officer with USAID and manages the Integrated Partnership Assistance Agreement with the common market for eastern and southern Africa, COMESA. She focuses on seed, biotech, and regional policy harmonization.

With that I'll go ahead and pass it on to Mark to kick things off.

*Mark Huisenga:*

Should I stand?

*Julie MacCartee:*

It's up to you.

*Mark Huisenga:*

Probably people will see me a little better. I see a lot of real seed experts in the room so I don't know how much I'm going to be able to shed a light on anything that you guys don't already know – especially this guy. There are five emerging areas in Feed the Future where we're seeing some real constraints in the seed sector. One of them is the agriculture business enabling environment framework. This isn't new. We've had challenges with these in many countries for a long time. But it has been problematic in some countries, much more so than in others. Early generation seed supply scarcity, generally low capacity of some of the

NARS and the seed companies. Financing continues to be a challenge and just generally farmer's awareness of improved varieties of seed.

If we just look at the agribusiness enabling environment for seeds there are two basic models. One is the U.S. The other is the EU. And what we see is that for registration of seed companies and contract farmers in the U.S. there are no requirements that such companies register, although individual states do have their own requirements for company registration. In the EU it's required but there is a minimum number of criteria around hygiene, sanitation, and some other basic factors.

In the U.S. variety registration is voluntary. In the EU it's mandatory. It requires for field crops two years of value conservation and use data and two years distinctiveness uniformity and stability data. For vegetables it's one year distinctiveness uniformity stability data. In the U.S. seed certification is voluntary. It's up to the owner of the variety to decide if they want to register their variety or get it certified. It's mandatory for field crops in the EU and voluntary for vegetable crops.

And then you see developing countries tend to be on one side or the other with respect to the U.S. and the EU model. South Africa, India, Bangladesh – for instance – tend to follow more the U.S. models where it's voluntary registration certification. And in the EU or in some countries like Turkey, Ukraine, and much of Sub-Saharan Africa it follows EU models and I think you can look at which countries were colonies in which countries in Europe to understand that.

I'm going to pass by the early generation seed. You're going to hear more about that in a minute. We are dealing with NARS and seed company capacity issues. Just in the last year we had a situation where one of our NARS lost about \$400,000.00 worth of breeder seed because they didn't do their isolation properly. That's an example of the kinds of challenges we have working with the national agriculture research systems. This is just a list of some of the things we're doing to try to strengthen the national systems as well as seed companies.

So a lot of work through the consultative group for international Ag research as well as we've got Scaling Seeds and Technologies Partnership with Alliance for a Green Revolution in Africa. Partnering for Innovation is doing a lot of work on getting new seed technologies commissions. And we see a lot of missions with their own scaling plans focused on technologies.

Finance has been a challenge, continues to be a challenge for smallholders and for seed companies. If you just break the challenges into their component pieces farm infrastructure is an expensive cost and it's one the seed companies have a hard time getting money to do. Finance is not easy just for that kind of expense.

Likewise fixed asset purchases, working capital – especially since it tends to be seasonal – is difficult to finance. Capital equipment is another one and then just smallholder input finance s

One of the things we see and some of the factors that drive up the seed sector costs – just the environment for finance generally. Capital costs in a lot of the countries in Sub-Saharan Africa and elsewhere are very high. You see 40 percent maybe in Malawi, 30 percent interest rates in Ghana. In those cases companies aren't going to want to borrow. It's just too expensive. Land tenure: without certain land tenure you can't use land as collateral in some of these countries.

Collateral registries often don't exist or asset registries don't exist. Credit rating agencies in a lot of these countries also don't exist. And then there are restrictions on deposits. So just in general those push up the costs of finance. Seed companies; we've talked to a lot of banks and venture entities. Some of the things we hear from them, yes they're under-capitalized right? They don't know how to keep their books properly. Also their revenue tends to be seasonal. So it's very difficult from a lender's perspective to finance seed companies.

And then smallholders – Microfinance hasn't done what a lot of people hoped it would do in terms of getting finance and inputs to smallholders. Savings has also been challenged but I think there's more that we're seeing happening with savings instruments now for getting capital smallholders. Some of the opportunities – Going back up you see – So we've surveyed a lot of seed companies. In fact this is something that we did just in December.

And what we hear overwhelmingly is what they'd really love to get is some kind of line of credit finance. Is it possible to put that kind of financial package together? We don't know. We're exploring. Maybe some people here might have some ideas. If we can get line of credit financing we might actually be able to get some kind of a DC-8 or Risk Sharing Instruments behind it. Capital equipment is uniquely suited to leasing instruments.

And that's happening in some places where – For instance in Zambia they're doing tractor leasing. And then for smallholders there is something of a push towards maybe mobile savings products as opportunity or maybe some kinds of saving clubs. These have been attempted in some countries but maybe they could be used more effectively for inputs and then generally farmer awareness building.

Last year at the African Green Revolution Forum I had an opportunity to talk to Mike Mack, the CEO of Syngenta. And one of the things really wanted to emphasize is farmers aren't going to adopt a new variety all at once. They're going to usually have a 10, 50, 80 rule. They're going to try a variety maybe on 10 percent of their land one year, 50 percent the next, and then if they really like it they'll go all in up to 80 percent. And then keep a little land set aside for some experimentation.

We do see that, not just in developed countries but in a lot of Sub-Saharan Africa. Farmers will experiment but they need to be aware of the technologies and what the benefits are. So some of the things that we're trying to do, and not all of this is new. It's been a considerable investment for us, for Gates, for some other donors and agri-dealer certification.

It's building farmers' assurance and the technologies if they try them are going to be reliable and trustworthy because that's been a real problem for farmers getting fake seeds. Enforcement is another issue. And there are different approaches to enforcement. In the U.S. we have a "Truth in Labeling" approach. In the EU it's much more the certification and trying to do assurance through the certification system. They have different enforcement mechanisms depending on how the country is organized.

And we're trying to work with countries specifically on improving truth in labeling enforcement or enforcement through the registration system. Free seed – there's no such thing. A lot of seed that comes in after a disaster for instance tends not to be the best seeds. And then farmers continue to use seeds that are slow yielding seeds. Also there's an interesting – TASAI – And I can't remember what it's – But it's a seed index that was recently developed by Cornell University.

One of the things they're looking at is how old are some of the varieties in some of these countries? And what kind of yield is associated with the varieties? And we're seeing in some cases there are varieties floating around in Southern Africa that go back to the early 1900s. Yields aren't going to get much better on those. They're not good and they're not going to get better. And then we're working now more on looking at using mobile and social networks to build farmers' awareness of variety.

I think with that I will just turn it over. And this was a study that USAID and Bill and Melinda Gates Foundation recently co-funded. Pradeep will tell you about that but it's particularly dealing with some of the challenges we've had on early generation seeds.

*Pradeep Prabhala:*

Thanks Mark. I'm Pradeep Prabhala. I work for Monitor Deloitte. And as Mark said we did this study about three months ago. It was a 12-14 week study. And I think the premise of the study was that there's a significant bottleneck to foundation and early generation seeds in Sub-Saharan Africa. And the bottlenecks are – as articulated by I think both USAID and BMGF that listen there is a lot of research being done. We've been funding a lot of research institutions on getting new varieties.

But it seems like when we actually see what is being used by the farmers a lot of the new varieties that are being researched are not getting commercially used. And we think there's a big challenge and this needs to get fixed. However I think interestingly a lot of donors – depending

on who you speak to – tend to take very different approaches to how you solve these bottlenecks.

There are some who would say that let's get the private sector involved and let's start incubating private seed companies and get them to do early generation seeds. That's one approach. And some others say that no this is all about biodiversity and we need to actually have the public sector play a greater role. So when we actually came to try to do this investigation we realized that the conversation in the space typically tends to be pretty lopsided. But it's just often not based on evidence on the ground.

So we said that let's actually do a piece of work that looks at where exactly should private sector be involved in solving this challenge. Are there private sector opportunities at all? And where is it that the public sector has a role to play? The commercial economics of doing early general seeds don't work for the private sector. I think obviously this is – I'm trying to sort of make it really simplified as to whether this is primarily in economic argument or are there sort of other factors that get into it? But from that extent I think the study is limited because it looked primarily at economics of doing early generation seeds.

We've come up with some recommendations as to in what context should governments think about bringing private sector in versus in what context should they actually be mitigating from the risks and costs of early generation seed production. I think the other thing that the study did was that it for the first time ever did a lot of work on economics of foundation seed and breeder seed production. And I think one of the big conclusions that we came to as a part of this study is –

I don't know if many people realize the business of foundation and breeder seeds and a really small business. If you look at the multiplication rates between foundation and breeder foundation to commercial seed the ratios are pretty bad. So fundamentally if you were sort of trying to get into the space I think some of the strategic implications are should you be setting up new companies that do foundational breeder seeds? Or should you be actually asking your private companies to back into it and do it?

I think based on economics we've come to some conclusions as well around saying that what is the size of the business? What is there to an investment? And who in the value chain could actually take on this responsibility? I'm going to share a few findings from that study today. And please feel free to stop me. This is obviously a significant study with a lot of economics. I'm not going to into today though. The package is available with USAID.

But I'm going to spend some time chatting about the key recommendations and how we went about doing it. I think a starting point: I think most people would be familiar with public goods, private goods, common goods, and club goods right? And I think from an

economics perspective I think there was a pretty clear framework that already existed which talks about I think using excludability and rivalry. How do you actually think about various goods in the marketplace?

And we based our study based on understanding this frame which is pretty common. At a very simplistic level I think our private goods are places with private sector markets. There's a demand and there's profitability. And you are able to address it versus I think public goods is when there's a lot of demand but there's not money to be made in terms of marginal economic value. And I think these sort of correlate to that.

I know that I think people think that it's pretty radical to look at economics that are just based on a pretty well-understood theory of what are public good and private goods. And we try to apply this theory to seed systems – early generation seed systems. So initially what we did is we said that a lot of times actually there's a discussion as to whether the economics of seed industry and determined by policies.

And if so by fixing policies can you actually address the issues in terms of economics? But in reality what we realized was that a lot of fundamental economics and seeds actually depend on the seed varieties themselves, depending on how often would the seed retain its quality over a number of years. For instance is the differentiated yield good in a value proposition for the farmer to actually buy them – sort of buying the conventional farm seeds or using the farm seed seeds.

There are a lot of complex dynamics that go on with respect of economics of seed which are all not actually dependent on the policy involvement. Some of the factors that influence I think demand for seed would be things like what is the underlying commercial value that the farmers could regroup from a particular seed variety? For instance in legumes in Africa we know that the commercial markets for legumes is not that good which translates into incomes being low for the farmers which then translates into the seeds not being as profitable for the farmers to use.

Now I know I'm generalizing because legumes as a category is pretty broad. I think some could argue that it is a \_\_\_\_\_ piece. You already have significant markets and there are a lot of traders. But I'm generally trying to make a statement that if you look at certain types of crop lives there is a demand issue. And then there are other issues where even if it's harder to actually invest money in getting hybrids done in certain crops because the crop technologies are pretty hard.

And then the other dimensions being that even if you were to generate – Even if there was demand for a particular seed variety and if there is actually technology to do it... your seeds over multiple years becomes a bit of a bottleneck. All these actually contribute to some of the economic issues. If you look at we've actually said that there are four broad market archetypes that you have.

And the two axes that we have – On the Y axis you have the level of demand for a particular seed. When we say demand this is monetized demand. I'm trying to make a distinction because if there's demand that farmers need seed but they can't pay for it then it's not actually demand. It's the level of monetized demand on one axis. And on the other axis we've looked at what is a marginal economic value in a particular crop. In a rough sense is there a profitable opportunity for people to engage in seed production or buy seeds in the space?

If you look at it there are four broad types of markets here. I think the one which we've ignored for the purpose of the study is the niche area. We said that it's highly profitable but the demand is really low. These tend to be seed varieties which are used for instance at Cassava beer production. Because it's a pretty niche market the demand is not substantially high. It doesn't make sense for a seed company to come and do seed production in that space.

But it's still sort of a worthwhile business to have. But we've ignored it because those are very specialized cases. It's mostly industrial users of this crop and so we've ignored it. Then that leaves us about three market archetypes. The first one is a private sector market archetype. This is something that you see with hybrid maize in a lot of markets. And in this archetype what we're seeing is there's a substantial monetized demand for these seed varieties from the farmers.

And there is actually enough money to be made because the technology yields certain returns. We call that a private sector archetype where I think the recommendations of the study – I'll talk about that – is primarily about trying to drive the early generation seeds in the space by getting private sector involved. So in the case of the governments are investing in these spaces then actually that's a wrong answer to base for resource investments.

The second one is a public sector one where we're saying that you actually have the level of monetized demand being pretty low and the profitability being pretty low. I think are places where – These could be food security crops that don't have commercial values. Farmers are then effectively not making incomes. But I mean there are some examples like sorghum which actually fall into this category. And where we said these are public sector archetypes.

We need actually public sector to play a significant role in early generation seeds from end to end. And mind you when we're talking about public sectors/private sectors we're talking primarily about financing. They're not talking about operations. I'll come to it. I'm say that I think if these seeds have to be – if early generation seeds have to be funded then it has to be funded by public sector because there's no commercial opportunity.

But then you could see a situation where the public sector could fund it with the private sector actually operating it. But I think these archetypes

are fundamentally regarding financing. And the third archetype is what we call public/private collaborations. It's places where I can build a business case but not quite. I think a lot of the commodities actually fall in these areas where you're required public investment to offset some of the risks for the private investment or offset some of the costs.

And there are actually two types of archetypes in public/private. I think we've seen some places where there's a significant supply side investment that is required in some of these seed systems. So it's a supply side risk mitigation with this. In other cases there's actually demand which is pretty low. I think with all the public investment that comes into this space should be about sprucing up demand so that the economics of the stuff works. We've actually separated them out.

And we've started plotting I think what are the different crops that fall into this space? And also it's interesting. I think we've gone back and forth as to whether – Is it fair to say that hybrid maize is always a private archetype? No because for instance I think in a market like Zambia we've seen that markets are fairly privatized and private sector actually has significant opportunity that applies. But I think depending on how the policy environment as it stands today exists that hybrid maize today might not actually be in the private sector archetype but the government should seek to move them towards that direction as we move forward.

This in summary is probably the recommendation as where should people get involved. If you look at it these are pretty dense slides. I understand. So on the Y axis we actually have the whole seed value chain starting from variety and research and development to marketing and distributional seed. And these are sort of the breeder seed production and maintenance and foundation seed production of the places where the study focused on. So what we tried doing is now based on detailed understanding of economics of foundation of breeder seeds and these different archetypes is started or led us to where should the public sector be involved and the private sector be involved from a financing perspective?

As you would see in the public sector archetype we think that almost everything needs to be public sector except for the research which is done by NARC's or sometimes there are private research institutions that are being funded by the foundations or USAID which can actually do this piece of work. But it's largely a public sector driven play. And the private sector driven play we think that there are economics that make it worthwhile for the private sector to do almost everything in this.

Barring perhaps I think a variety of research and development because we haven't actually done the economics of it. Sometimes I think the economics of researching new varieties is so hard that somebody might not be able to recoup the investments. So we've not looked at those economics. We've actually left it as something that potentially you still need the national research institutions to work on the private sector.

But broadly what we've done is on the private sector archetype almost everything is done by the private sector. In the two archetypes which is the public archetype one and two. As you see we've actually identified places where it makes sense for the public sector to come and partner with private sector and what those opportunities are. And that's pretty intuitive from the previous slide which is that in places where there's a huge supply side investment to be made to do this I think we need the government to come in and help on the supply side versus I think in the archetype there are more demand side issues.

I think we want the public sector to come and offset risks and costs and actually marketing the seed and so on. What does all of this mean? And why is this so interesting from our perspective? Today the resources are pretty concentrated. I mean every government has only a fixed amount of resources to invest in seed systems. And sometimes I think as people are advocating for policy changes or people are actually doing work in the seed systems area they don't actually tend to give guidance to the governments in saying that if you were to make a relative allocation of resources across these different types of seed archetypes where would you actually put your money?

And why should you do that? And often it's a hard conversation to have because it is your view versus my view. Often these conversations tend to be value judgement based and value-centric rather than actually being fundamentally rational. So I think what we've done is this provides a very effective framework for the development community to take to the various governments and have a candid conversation as to let's see as to what are the big crops that you prioritize as part of your national agenda?

And let's help you think through if you were going to make investments in early generation seeds. Where would you actually do that? And then let them actually ease policies in some places where they shouldn't actually be intervening as governments. For instance in the private sector area the most recommendations that we had in that archetype is to remove any market distractions that you're creating by putting in money.

By putting in money you're dis-incentivizing private sector from actually coming and doing work in that space. And in fact your chances are much better if you step back. And I think some of the things that we spoke about are transitioning out from plain or direct roles in those value chains for the government and moving subsidies in some cases and making sure that the markets are able to work. And for donors it is about demonstrating the profit put into some of the private players.

For instance today you would go to a private sector player and given then a working capital drawn out to make sure that they're starting it. But then if that private sector fundamentally doesn't have the economic case of doing it then it *[inaudible comment]* after you step back. But if they can't do it then you're putting money where you don't need to put it. We think that the donors should substantially focus their efforts in

demonstrating to the private sector that there's an economic case and there's a profit potential in this space.

Think about potentially addressing some of the high fixed cost issues when we're talking about some of the financing that we spoke about. Can you actually think about getting markets to finance these companies so that they could move it? Because the money could be recouped.

In the public sector I think we've said that this is fundamentally about improving the efficiency of existing systems to make sure that you're able to get things out of the research institutions to the commercial feed pretty quickly. And I think some of the things that governments could think about depending on their biases as to how they run their economy could be for instance can you completely do public-funded, private-owned breeding and foundation seeds in these markets?

And that's a pretty radical idea. I don't think every government needs to do that but I think the thing that we're trying to say is here you need to fund a lot of it. And you need to sort of think about where is it that you need to fund? How do you improve the response in this? How do you set up the right incentives for your public institutions to do this job effectively? I think those recommendations are broadly centered around that.

In the public sector and the private/public partnership archetype: one, which is mitigating demand risk. These advance purchase commitments could be a great idea. I know a lot of people talk about it. But where do you actually apply it? So for instance we know that there's a case. We know that somebody needs to take the risk for demand. Then can the public sector come in or the donors come in and say that we're going to underwrite some of the demand risk that exists for you today.

Because I think if you look at it I think it's a reasonably good bet to make in this space because we think that once you can start the process I think there's going to be a commercially viable business as long as the demand risk is being mitigated and some of the training costs are being funded. And mostly we sort of see the roles for public and private sector in that space. I think in places where there's significant production cost for foundation breeder seeds and dealers sort of depend on things like isolation rates being high.

Sometimes I think availability of contiguous land to be able to do this might be harder. I think we said that some of the supply side incentives and subsidies might be helpful to kick start the process from a public sector perspective which then will sort of move the chains forward. And that's sort of broadly I think what we tried coming up with. And as we said I think I didn't go into the detailed economics of doing each. We've looked at about four markets and looked at multiple value chains and looked at the economics of it to come up with conclusions.

Obviously I think this can't be implemented the way it is. And I think some of the work that will be done going forward is to take this framework and it becomes a topic – basis for a conversation of the governments to help them design their own plans but with the understanding that not all seeds are ripe for private investment. And there are places where the public sector needs to get involved. And even if you're collaborating I think it needs to be based on a good understanding of underlying economics. Thank you.

*Julie MacCartee:*

Those are very useful slides and I think I definitely want to review them myself. Lots of dense text so they'll be up on the Agrilinks event page for this seminar. It should be later this afternoon if anyone wants to be able to download the slides and review them. And so quickly before we get into the Q&A period we will have Charlee Doom from the USAID, an Ag Foreign Service office going over seed trade, harmonization in Africa. I'll figure out how – I can advance the slides yes? You can do it from back there? Okay great. All right so we should be hearing Charlee's voice momentarily.

*Charlee Doom:*

Thank you for introducing me. Thank you everyone. It's very humbling to be speaking to this audience because as I'm looking through the participant list on the webinar I see several of the folks that are architects and authors of the policy and strategies that I'll be discussing and referencing throughout my presentation. Quickly I'll be just providing a little bit of information on the seed supply and demand situation in COMESA. COMESA is the Common Market for Eastern and Southern Africa.

And it reaches from Egypt and Libya down to Madagascar and Zimbabwe. And it's where the East Africa USAID Mission focuses its seed policy efforts. I'll also then talk about our collective USAID efforts to harmonize feed policy not only in East Africa but also in Southern Africa and West Africa. You can advance to the second slide.

Right now in the COMESA region we produce roughly 500,000 metric tons of seed each year against a demand of more than 2 million metric tons of advanced seeds. The number one frustration that is shared with us routinely by farmers and formally in questionnaires is that they want greater access to improved seed varieties. On top of the perennial issue of finding quality seed we have issues in the region including the spread of Maize Lethal Necrosis Disease. That is seed borne plant diseases that are causing seed supply to further decrease and causing supply issues.

For most of Eastern and Southern Africa most seed comes from Zambia and Southern Africa which causes some issues with countries that have trouble trading with Zambia and Southern Africa. Next, talking a little bit about the feed harmonization process in COMESA. We have Lloyd Le Page participating in the webinar today. And he's actually asking a lot of questions and providing a lot of thought-provoking discussion in the chat session.

He's been following this for a long time. But for more than I think 20 years we've been trying to harmonize seed policy. They're saying in the chat box that you guys can't hear me. Can you hear me now? Are you able to hear me? Okay perfect. Again back to the 20 years history of trying to harmonize seed policy in COMESA. Fortunately in 2014 COMESA was finally successful through the specialized agency ACTESA or the Alliance for Commodity Trade in Eastern and Southern Africa in getting the policy which is their process for passing a harmonized seed policy.

I've shared the COMESA Seed Trade Harmonization Regulations with the webinar. So if you want to download those you can. In short what the harmonized regulations provide for is a streamlined process to access the whole of the COMESA market. Before harmonization if you were a seed company that was trying to introduce a feed variety in any of the countries in the 19 member states of COMESA you had to do it one by one.

So if you wanted access to five countries you had to go through the regulatory process in all five countries. Now with the benefit of the passed policy if you are able to have a variety released in two countries it's then released in all 19 countries. What this does is it lowers the cost of business and makes the value proposition for feed companies much more predictable. Pradeep mentioned that seed varieties in many cases get shelved.

And what we expect with the access created by the harmonized seed policy is that more of the varieties where the value proposition wasn't high enough to commercialize them they'll now be more interesting for folks in more countries and therefore pulling more of those varieties from the lab and from testing fields to farmers that are actually interested in producing varied and improved varieties.

Speaking specifically about how to implement this policy, once we pass a policy that's the end of the beginning. Just having a policy in place isn't enough. You've actually got to follow that up with a lot of activities to nationalize and domesticate that policy. And USAID funded in 2014 the creation of what's called COM-SHIP which is the COMESA Seed Harmonization Implementation Plan. And through this document we enumerated all of the activities that we thought were necessary to fully implement and all 19 member states of COMESA this seed harmonization policy.

Again I shared COM-SHIP with all of you. It has four main strategic objectives and I'll only reference one 'cause I just have a few minutes to talk with you today. The first one is to prepare for and support phased domestication. And that has several sub-elements within it. But primary to that is the national seed alignment in each of the member states. Both USAID, DIFD, and other donors are supporting the updating and alignment of each of those seed acts so that they can support national level implementation of the harmonized policy.

This also supports variety release systems. AGRA has funded a variety release catalog which would convey to the market what varieties have been released in two or more countries. And also it standardizes and improves quarantine and finally sanitary related activities. When I first started talking about the idea of regional harmonization I referenced more of 20 years of historical efforts to harmonize the policy.

I've only been involved with this for about two years myself. But what helped make this process succeed this time was the participation of both the private sector as well as civil society. So the African Seed Trade Association – or ASTA – was a key contributor and participant in bringing along with it the seed associations of the various member states as well as private sector partners to the conversation and to improve the dialog and ensure that the regulations were actually relevant to the marketplace.

And also by bringing in civil society you bring in more diverse conversation and dialog around the sovereignty of farmers. Next please. Forgive me. What are the benefits of harmonization? Why did USAID invest in this? Why are there donors concerned? And what's the benefit to the smallholder farmer? It's our hypothesis that if you provide farmers with access to improve seed varieties their productivity and food security will improve.

Feed is the first limiting factor of production. If you're planting a seed variety that has a maximum production potential of 100 units no matter how perfectly timed rains might be, no matter how well soil fertility is managed or how pests are controlled 100 units is going to remain the production ceiling. And if you provide access to farmers to a feed variety that has say 120 or 130 units of production that's the ceiling that they're working with.

And the same on the down side; if you have a higher production potential, if you have poor rains, if you have poor soil fertility. If you have sub-optimal pest control you're still going to have a higher yielding season at the end of all of whatever maladies you may endure. One of the things that often comes up when we're talking about the benefits is the concern over the price of seed to the farmer. And I also saw a lot of dialogue in the chat box asking about making sure that the farmers are able to access the seed.

This is something that I look forward to discussing in greater depths in other platforms. But I talk about having a market-based price for seed. In various geographies seed has to be priced at different levels so that it's relevant to that market. And in some cases it's subsidized. In others it's not. Maize being a great example of where farmers are able to see the market value and often pay a lot more for seed whereas something like cowpea or pigeon pea has the market value of investing in improved seed is isn't viable to the farmer. They're not willing to make that gamble.

Anyway this conversation leads into my second highlighted benefit of seed policy harmonization. And that's that you increase the opportunities for seed companies to participate more widely and to benefit more from a more sophisticated marketplace. So if you can predict your cost of production and your cost of disseminating a variety across a larger geography you can obviously draw more benefits from that. In addition to being able to protect the cost of variety release through COM-SHIP, general cost to seed business will decrease.

This is from greater mutual recognition of testing that we expect to be achieved. The time and cost of transiting seed across borders will also decrease, lowering the cost of doing business. The certification process and even labeling as well as mutual recognition of quarantined test lists again improves the efficiency of the market.

Finally – last slide. So I've talked only about COMESA today but there are seed programs that are also active in the SADC region of the Southern Africa region as well as ECOWAS in West Africa. And just this month there was a tripartite agreement that was signed between COMESA, SADC, and EAC. There are no discussions at this time that are advanced on including harmonized tripartite seed policy. But in the next month and years I expect that will be a priority issue for the tripartite free trade area.

With that I will turn it back to Washington.

Julie MacCartee:

Great. Thank you Charlee. Why don't we give a round of applause to our three presenters? *[Applause]*

*[End of Audio]*