

TECHNOLOGIES FOR AFRICAN AGRICULTURAL TRANSFORMATION

Panel Moderator: Jennifer Blanke

October 18, 2018 - 4:10 p.m.

Introduction

Okay, and I'm going to put a pause on their gathering in the Sioux City Room. So Tom, Lucas, Ponsi and Karsten – let's not go to the Sioux City Room until 5 o'clock, because this next panel is the perfect connection to this last panel. Technologies for African Agricultural Trade, a great topic to follow the one that we just concluded. So those of you that want to talk to this panel group that just exited the stage, wait until this group is done for that occur.

So if I could have the next panel out here, and I'll provide a brief introduction to Jennifer Blanke. Jennifer is Vice President of Agriculture, Human and Social Development for the African Development Bank. She previously served as Chief Economist at the World Economic Forum. She holds a master's degree in international affairs from Columbia University, additional degrees in international economics from Geneva, and presently a member of the Canadian Government's Council on Economic Growth. So, a great topic here to think about and talk about, technologies for African agricultural trade. Jennifer.

Panel Members

Jennifer Blanke	Vice President of Agriculture, Human, and Social Development, African Development Bank
Lawrence Kent	Senior Program Officer, Bill & Melinda Gates Foundation
Nteranya Sanginga	Director General, International Institute of Tropical Agriculture
Roy Steiner	Managing Director, Rockefeller Foundation
Hon. Prof. Ruth Oniang'o	Chair of the Board, Sasakawa Africa Foundation
Olusegun Obasanjo	Former President of Nigeria

Panel Moderator

Jennifer Blanke

Vice President of Agriculture, Human and Social Development, Development Bank

Thanks a lot. So my name is Jennifer Blanke as you've heard and I'm Vice President of Agriculture, Human and Social Development at the African Development Bank. And we're very pleased to be here today to be talking to you about something that we announced really for the first time publicly exactly here a year ago, which is technologies for Africa's agricultural transformation. And we promised last year that we would come back and give an update and

tell you what we've done, and so that's what we're doing. And we're very excited because we actually have made quite a bit of progress. And in a partnership like this which is new, that's not to be underestimated, so very happy for that.

What I'm going to do is I'll quickly introduce the panel, then I'm just going to show you very few slides so that everyone's up to speed on what we are talking about. And then we'll get to the panel, and I'm hoping that we'll have time for a Q&A at the end. I think all of the speakers will stay somewhat brief to give you your chance to speak afterwards.

So I'm here joined by many of our partners in crime in TAAT and in agriculture in general, so I'll just introduce them from left to right, and I think that you'll know pretty much everybody on the panel very well. There's Nteranya Sanginga who is the DG of IITA and a very important player in everything that we're doing around TAAT. We then have Roy Steiner who is Managing Director at the Rockefeller Foundation. As everyone knows, Rockefeller has been critical in driving technologies in the agriculture space for decades. After that we have of course Professor Ruth Oniang'o who after many different things is now the Chair of the Board of Sasakawa Africa Foundation, among other things. We have Lawrence Kent, who is the Senior Program officer at the Bill & Melinda Gates Foundation, also a really critical partner in this effort. And finally, and I think who needs no introduction but President Obasanjo, the former president of Nigeria and also a great friend of the African Development Bank and someone who will bring to this group and this panel a lot of wisdom, particularly in terms of what we need to get from the government and what the government's role is in driving out technology.

So let me quickly just present a few slides to you, because I mostly want to listen to the panel, just to let you know what we're trying to do through TAAT. So just going back to why we launched it in the first place, and this is something we've been discussing quite a bit here over the last couple of days – agriculture is critical to Africa. It is employing upwards of 70% of the population and really is at the center and at the core of African societies and yes does not contribute significantly to GDP in most cases. Productivity has not kept up with GDP, let alone population growth.

And so this is something that is a real challenge, and yet at the same time there's a massive opportunity, because we have rising middle class, rising urbanization. People are demanding more and more high-quality food, processed food. And this is all about moving up the value chain, and this is something that African economies can do if we get the right technologies out there. Right now you can see the opportunity in the billions, more than 35 billion at this point, net imports that Africa is seeing every year; and that will, if we don't do anything, go up much higher. And in fact the opportunity is so huge, if you look at some estimates, by 2030 the food market in Africa will be about a trillion dollars. And so this is a huge opportunity if we can overcome the challenge. And I won't belabor the challenge too much, but if you look at productivity rates, as you can see on this slide, Africa's, and sub-Saharan Africa in particular, productivity rates in agriculture have remained very low while the rest of the world has taken off.

So why is this? The bottom line is that the technologies that are needed are just not getting the farmers at scale, and so this is what TAAT is aiming to do. It's basically taking those technologies off the shelf that exist and getting them to farmers at scale. Green Revolutions have happened around the world, and today there are more technologies than there were during those Green Revolutions, and yet it's not happened yet in Africa. So the goal here is to foster that Green Revolution in Africa. And in particular, given that we're talking about 54 economies,

many of them small economies, it's about taking a regional approach, an agroecological approach so that we're rolling out the different technologies across the zones, rather than having to go through approval processes in every individual country.

Now, very importantly it's a partnership. It brings together all the CG Centers, the NARS. It brings together seed companies and all of that in terms of distribution but also very importantly all of the donors and the governments. And you see this here, and this is not even exhaustive. Now, it's tricky, and that's some of what we're going to be talking about, because getting all of these different organizations with their own institutional needs and expectations is challenging; and yet it's worth it if you can get everybody working together.

In terms of what we've done, and we're going to hear a bit more about this now, we are developing what we call "compacts" for either staple crops, you know, rice, maize, etc., or highly nutritious crops, beans, orange flesh sweet potato, and so on and so forth, and also some enabling factors, things like soil and water, and making sure that we are deciding centrally, what are, using the best expertise, and it's really across different sectors, what are the best technologies that we should drive out and then driving them out together. We're working in 31 countries already, and we're just starting to really get this out into the fields now.

I just wanted to spend one last moment mentioning the fact that in general this is really about getting the latest technologies for productivity enhancement and production, but it's also about fighting pests. And we've been deploying this most recently, and it's been a really good effort and experiment for us, to fight the fall armyworm, which many of you have heard about. We've been talking about this, and the alarm was really sounded last year when we were here. And this is all about the fact that pests also don't respect borders. And so how do you make sure that you can quickly get the right kinds of pest-resistant either pesticides but also the right kinds of crops out very quickly to the fields. And this is something that we started in earnest. We're basically about to reach 15 million farmers in Southern Africa this year. Our goal is to reach about 50 billion over all throughout Africa when we go to the other regions next year.

And so finally, really what do we hope will come out of this? It's that we're going to massively increase productivity because we're getting everybody to work together in a different way. To get those technologies out there, we're going to massively increase the production, we're going to be able to feed Africa and help Africa to feed the world and not inconsequentially create a lot of jobs in the process, which is something we know is so critical in Africa and good jobs.

So with that, I think we get a sense of what we're trying to do. I think I want to now turn to the panel and hear a bit more detail, and particularly I'd like to start with Dr. Sanginga, because IITA is really at the core of what we're trying to do in terms of helping us to coordinate all of this. So given obviously your role now but especially your expertise over the years, what is it that will make all of this a success?

Sanginga Yes, well, thank you, Jennifer. Yeah, you said very well that this is not about pilots and experiments, it is about scaling up our successful technologies we have so that they get to the hands of farmers. I would just like to give you an example of the seed system in Africa, and you can see how the mindset change has prevented really the culture for moving very, very much in Africa.

So in Nigeria before 2011 agriculture was just like a social activity depending on aid. If you take the penetration of seed system, Nigeria was below 50%, for example. And

we can give a lot reason for that. Even the government was waiting for donors' money to do agriculture. And if you count the number of seed companies during that period, with less than 10 producing very poor seed quality and soil.

And then in 2011 we had a new minster who was quite young, whose first decision he took was to change the mindset. And the motto in Nigeria in 2011 was *Agriculture is a business*. It's got to scale and reach as many people as we could. Simply changing the mindset, a lot has changed in Nigeria. The first thing he did was basically to stop corruption fertilizers and seed system, remove the government from that business. And he invited the private sector to come. In three years the number of seed companies jumped from 10 to almost 100, adoption. Just to take an example of rice, in the middle part of Nigeria, basically moves..., the seed system moves there from 30 to 60%, and Nigeria stopped importing almost 50% of the rice that we had been importing. It was purely a change of mindset where the farmer was not waiting anymore for aid or NGO to come and give seed. It took value basically the resources and the values you can get from just commercializing agriculture. I think that is just an example of what is happening on the continent for the moment. And one of the obstacles basically is getting technologies setting in or still use what all technology in tact is I don't find all the technologies that can make a difference, basically take them to the private sector and to the hand of the farmer.

This program was started almost one year ago, and we see all this change of the mindset of the government. Just to give you an example, The President of Togo wants to imitate President Obasanjo and create an initiative on cassava, presidential incentives on cassava. He called us to go and help him. But what was very interesting when we were discussing with farmers, the farmers discover that the variety of cassava they were using were very old, low yielding, was 9 tons instead of getting 25 tons. But they realize in Nigeria there are some varieties which give triple the yields. And the role of that, as a matter of fact, picking some of those varieties which are so successful in Nigeria and transfer them to Togo. And those varieties are being tested in Togo.

So really in summary of that, these also involve the mindset change where agriculture basically become a business, become profitable and that bring money in hands of farmers.

Jennifer Great, thanks. So all about changing the narrative, changing the mindset – agriculture is a business, not as a way of life. So, Roy, turning to you because Rockefeller has been very involved in this area for a long time and I think has put a lot of (we were just discussing this before), putting a lot of the finance in that we're basically building on now. So given the experience and also your previous experience, what do you think will really make it possible to scale these technologies quickly, you know, getting them to the farmers? What would make this whole effort successful in a nutshell?

Roy That's a simple question. Thank you so much. I thought I would share a little bit about yield-wise, which is the effort by the Rockefeller Foundation to reduce food loss and food waste. And we've put quite a bit of resources into that. But some of the lessons that have come out of that is I think as most people in this room know, it's an ecosystem. You can't just do one thing. You have to do multiple things at the same

time. So it's not just farmer aggregation or technology or finance or policy. It's multiple things at the same time. But underlying that, one of the keys is to really understand what the farmers want and what they need. And at the Omidyar Network, Rockefeller and Gates, we've been starting to use acumens funds, lean data to really do these very quick, five-question surveys of farmers to help understand where to go and what to change.

What's amazing about this is that people think they know what farmers want and need, and they actually don't. And so we've got to the point where we actually ask the leaders of the different initiatives – What do you think your farmers are going to reply? And they take a guess, and then we compare it to reality. And it's always something different. It's always a surprise. And so what I like about that is that you have to be open and be humble and be listening. And one of the examples of that is we've been promoting these PICS bags that Purdue hermetically sealed, storage bags. And the folks who are running the program – oh, you market this bag using the fact that it's going to reduce the amount of loss. That's the most important thing. But it turns out that what was most important for the farmers, especially the women farmers, was the fact that you didn't have to put chemicals into the grain. And so they knew that that was more healthy. So actually changing the marketing to, oh, you're going to save, to actually, this is healthier for you and your family – that drove sales of that bag. Right? And so these little tweaks – to have rapid feedback all along is absolutely essential if you want to scale, because you have to be doing many things at the same time well.

The other thing that I think is incredibly exciting that enables scale now that we really didn't even have five or ten years ago were all these new financing mechanisms, that we can now use mobile networks. And that's getting better and better, because so much of the things that require transformation require capital, and so far smallholder farmers have not been able to afford that. But now with these new financial instruments and leasing, I think there's a lot of exciting opportunities there.

And then of course there's policy on top of that, which people here could talk a lot more about, so I'll stop there.

Jennifer Great. So complexity, also the importance of efficiency. And by the way on the new mobile technologies, as we've seen in Nigeria and as Dr. Sanginga mentioned, it's also about rooting out corruption. So it's quite amazing with some of these new technologies how many birds you can kill with one stone, so to speak. So, Ruth, tell us. I mean, we've been discussing I think TAAT for some time, and it would be great to hear from you what you think Sasakawa could do. I mean you've been working so much in extension and training and all these issues throughout Africa. You have one of the biggest networks. How do you see Sasakawa really being involved in TAAT and enabling all of these technologies not only to get to farmers but also to be used by them properly?

Ruth Thank you Jennifer. I was here just an hour ago, by the way, and so they are tired of looking at me.

Jennifer But I think you have a different dress on now, Ruth.

Ruth Yes, I feel so happy to have our elder statesman here, President Obasanjo, here on the panel with us. And to say that he actually served on the Sasakawa board even before I joined the board. He was a board member even as president. And for those who don't know, Sasakawa was established in 1986 following the 1984-85 famine that killed nearly a million Ethiopians. And Ethiopia said – never again. And so Sasakawa was created by the late Ryoichi Sasakawa, by still living President Jimmy Carter, and Dr. Norman Borlaug. So that's why we come here every year. And Japan Nepal Foundation has been supporting us consistently every year since 1986. So that's why I talk long term. It's not as much money as I know some of you use in this room, but it has been consistent. It's been long term. We know the farmer. We understand the farmer. We work with the government of the day, you know. We went to Ethiopia when nobody thought Ethiopia would work. Ethiopia now is able to export maize even to my own Kenya. They are not in Kenya, so we import maize from them.

So what have we been doing – technologies? Technologies exist. Roy, you know that from the Rockefeller Foundation. Technologies exist. Sanginga, you know that. They sit on shelves, they sit in papers. We continue to do research, and they just sit there, and we don't use those technologies. We have the answers. For goodness sake, we have the answers, so that's what we are good at, at Sasakawa. We are not in every country, but where we are, we are very good. And Dr. Borlaug would arrive and he'd go to the farmer. While you are going on with the niceties and being, you know, celebrities, where is he? He was with the farmer, smallholder farmer. They quadrupled maize yields, sorghum yield. Yeah, Dr. Gebisa there can attest to that. It was quadrupled. We know how to increase yields. We have the technology. Now the issue was – how do we process it through the value chain?

So the issue of processing, storing, you know, having technologies of publication, of machinery, we have had all that. So even at Sasakawa, we have the answers. By the way, we just need more money. We need more money, we need more partnership to reach more countries.

Jennifer I hope everybody's listening.

Ruth And especially Dr. Borlaug is listening, you know. And actually we can do it. So we want to be a part of this, and also we have the extension arm, which is the Sasakawa Africa Assoc. for Extension Education, where we have bred the skills of that, extension workers, those who have been on the ground for a long time. Because things keep changing all the time and especially with the new technology. With ICT we would like to go into E-extension but only where it can work. It doesn't mean it can work everywhere, but at the end of the day we know our farmer. Our farmer is our friend, and we can achieve by so doing, yeah.

Jennifer So resonating with what Roy said, which is: You need to listen. You need to know what they need. Don't assume you know what the farmer needs.

So, Lawrence, turning to you. Bill & Melinda Gates Foundation is very involved with TAAT, funding directly obviously the clearinghouse and really that group that is deciding on the technologies and working very closely with Dr. Sanginga. So given your experience on that, what do you think it will take to make this work? And

also—how does it link to the other work that you’re doing in this area at the foundation?

Lawrence Well, the Gates Foundation Agriculture Program really sets as its goal country-led, inclusive agricultural transformation. And increasingly, I think we’ve come to the realization that if we want things, innovations change to happen at scale, we really need to engage with both the government and private sector. Traditionally, the Gates Foundation... Roy and I were in the trenches together for many years. We funded a lot of good research programs and a lot of them that CGIAR Centers. And we learned that it’s actually pretty easy to give a grant to a CGIAR Center—Dr. Sangling’s, for example, or CIMMYT or IRRI—to do good research, to create some innovations, some breakthroughs. But then the hard part comes to dissemination, and then who can do the dissemination, who’s good at doing dissemination at scale. And I think we’ve sort of come to the conclusion that ultimately it has to be either the private sector or the government has to engage in that dissemination process. And products have to be designed in a participatory way with that in mind for them to really go to scale.

So a lot of innovations have come out of Gates Foundation’s investments in great organizations like IITA and CIMMYT and NARS and IRRI, etc.—things like improved technologies for weed management in cassava that President Obasanjo and I were discussing earlier. We can make a huge difference. Things in mechanization, biofortification, improved varieties that are stress resistant and higher nutrition—many interesting, promising breakthroughs, but then how do we get them deployed at scale. I think TAAT is part of the answer, because if something is going to be truly country-led and country government-led, TAAT is an opportunity for those countries to tap into, loan money from the African Development Bank, and then tap into the technical expertise that’s available through the TAAT clearinghouse to help design programs on the country level that are funded through African Development Bank money that can be a substantial amount of money that can really bring things to scale.

I think in the past or ongoing, there’s always been African Development Bank loans to agriculture programs, to nutrition programs. But sometimes the design teams haven’t had the ability to integrate the best technologies. And the TAAT mechanism and the clearinghouse that we support helps sort through some of the best technologies, the cutting edge technologies, things like semi-autotrophic, hydroponic seed systems for cassava, and saying—how can these be considered for integration into those loan packages, into the projects that are funded by the African Development Bank and co-designed by the African Development Bank with assistance from the TAAT mechanism.

So I'm very optimistic about what it can do and what a contribution it can make to actually scale up some great technological breakthroughs.

Jennifer Thanks for that. I mean, I do want to remind everyone that we’ll be doing this, obviously, through our country programs, but the World Bank is also working side by side with us and also IFAD and others. And anyone else that wants to join, please let us know, because I think there’s certainly not a lack of country projects that can benefit from these technologies. In a way, if you think about TAAT, what it does is it

almost like gets the technologies to the door, and now we need to get them from the door of the clearinghouse to the farmers. So how do we do that? And I think that's going to be really the key, both ourselves and other institutions and particularly the private sector, so that's going to be an interesting challenge.

So, Mr. President, having heard all of this, and you've been involved in this area for a long time. And we were talking earlier about some of the challenges that you see. But based on what you've heard from the different panelists and all of us sort of working on this sort of challenging, new effort, what do you see as some of the things that will really make this work and in particular from the government perspective. But I think we'd be interested in hearing from a policy perspective what you think are really the role of the government here to make this happen. What could other governments think about? And just in general your reactions to what's going on with this effort.

Obasanjo Thank you very much. Let me start by thanking the members of the panel and their different organizations for what they have done and what they are doing to change the face of agriculture in Africa and especially what they have done in providing funds for technology and for the work the one, the Rockefeller have done – fertilizer and all the things that you have done. And, Ruth, for what you are doing through Sasakawa Foundation.

I just want to want to emphasize the beginning of Sasakawa work in Africa. When Sasakawa saw and read and saw on television what happened in Ethiopia – and it was time to find a solution – they called on Norman Borlaug. And Norman Borlaug said, "Don't worry me. I'm too old." And of course Sasakawa was older than Norman Borlaug then, and Sasakawa said, "What are you talking about. I'm older than you, and I still feel I can be useful, then you have to be useful." That's how the two of them came together with President Carter that had the wherewithal within Africa to move on. And that was opted. That's how I got in.

Now, what I want to say about technology and the way it is affecting or going to affect the Greek production and food and all of that in Africa, is that already we have things that work. And we have technology that can get us there. Now, what we have is we have transition now, and will talk of transition in three areas. We have transition of new, a great business, rather than a cultural development program. That's one transition.

Another transition is the transition from old farmers to new, educated, young farmers. For I am talking of old farmers in my village. The youngest old farmer is my cousin who is 75 years old. He didn't go to school, and right now he is too old. But the young ones is all grandchildren who want to go in. How do we transition to them and make them be successful generation of farmers with education, with what they need in terms of influence and facilities.

Now, and this is where government comes in, in every aspect of it. I believe that we have enough. Of course, we can never stop and say yes, we have reached the end of our research and technology. But we have enough to get those going. DG IITA has talked about cassava. The representative of Good foundation have talked about – can cassava be pre-emergent herbicide? How much it can help? Now, how much of

these technologies is in the hand of the farmer? Now, we need to get more of it into the hands of the farmer. As Norman Borlaug used to say, *Take it to the farmer*. That is where it's needed, and we have to get it to the farmer. That's the first thing that the government has to help us to do.

The second thing is there are facilities that the farmers need that government has to provide or to help to provide. Now, I was with the IITA, the DG of IITA makes me an ambassador. The only they don't address me "His Excellency." But what he does is he makes me do things for IITA, which I really enjoy doing. The other day I went, and they had about 120 young boys and girls training in agripreneurship. And it's very interesting, and I asked them, "How many of you have money when you leave here?" 18 months. The DG said it varies and those that I met are doing 18 months' cost. And only 6 out of 130 said that they have money to go and start something after their 18 months' training. How many of you have land? Only three of them said they have land, out of 120. You might end the frustration of these young dynamic and vibrant boys and girls, all of them in the age of 20. Now, if they are discouraged, not only are they lost probably forever in agriculture. They will get the story around, and many of those that will have gone in, will not go in. So what do they need? What? Land? Because whatever you do in agriculture, you need land. I mean, if you are going into aquaculture, you still need land. Land, money for startup, and the DG of IITA when we were talking earlier, yes there's an enabler. We need an enabler, an enabler that government will have to provide so that these transitions from old farmers to generation, a successful generation of educated, vibrant, young farmers can take place. And it is the marker of partnership and government seeing itself as partner with those in agriculture. Not loading to them, because these young people know what they want, or any farmer, no matter. Farmers, we shouldn't take anything for granted. They are experienced and they are calculated, they are hard headed calculators. They know how about the season. They know about their crop. And all they need is to help them. And the technology that is there must of course continue to be improved upon, but let us get what we have to the farmers, and then we are there.

Jennifer Absolutely, so not forgetting about the talent, because you can get all the technologies you want, but if you don't have the talent in people who want to be on the farms, and if they don't have the land, then they won't be able to do anything. And so the government can facilitate with that. Do we have a chance to ask people to... Okay, so unfortunately I think we don't have time to go to Q&A. However, I would like to give each of the panelists a moment, because that was a lot of information. Just if you could think about one thing that you would like this group to leave the room thinking about in terms of driving a technology revolution in Africa, in African agriculture, what would that be? One thing, given that we almost have no time left. I think we are already overtime, but we'll take another minute or two, because people have to get to the ceremony. Dr. Sanginga, in a sentence or two.

Sanginga Get young people involved.

Jennifer Involve the young people. Roy.

Roy A system approach that really listens to the people we're trying to serve.

Jennifer System approach. Ruth.

Ruth Just helping young people who are interested now, the new crop of farmers who are willing to take up the technologies – how do we enable them to actually move on, and resources are required for that.

Lawrence I'd say enabling the private sector to play its essential role in scaling technologies and linking that to serious government investment in agriculture and those enabling policies to allow dissemination to accelerate.

Jennifer Mr. President.

Obasanjo A great business, taken as a business, and there should be partnership between those who are in that business, and the government.

Jennifer Okay, so when we think about technology, both the hard infrastructure and the soft infrastructure, let's not forget about the soft infrastructure, all that talent, all that business sense, and those great markets. Thanks, everybody. I wish you an excellent ceremony tonight. Thank you to the panel and to the organizers. I know it's been a long day. Thanks, everyone. Thanks, everybody.