

2013 THE "BORLAUG DIALOGUE"

October 17, 2013 - 2:00 p.m.

Panel: *Marcos Fava Neves, Moderator*

PANEL:

SOUTH TO SOUTH: COLLABORATIVE BEST PRACTICES ACROSS BORDERS

Introduction:

Bian Li

Director of Planning - The World Food Prize

Thank you very much for joining us for the afternoon session of the second day of the Borlaug Dialog. We had a great morning session, and this afternoon we have two panels to close out the day.

Before that, though, we have one announcement that we'd like to make. I'd like to invite Scott Mall from the International Center for the Improvement of Maize and Wheat, known as CIMMYT in Mexico, to come and please give an announcement. As you know, this is our 100th observance of the 100th year of Dr. Borlaug's birth, and CIMMYT was the place where Dr. Borlaug spent many of his years doing his research, and CIMMYT has a special program to also celebrate his centennial observance at CIMMYT as well. So with that, please welcome Scott Mall to make that announcement.

Scott Mall

Thank you very much. Before I begin, I'd like to thank Ambassador Quinn and the entire staff of the World Food Prize. I'm sure all of us have had a great time here. This is just an amazing event, gets more amazing every year.

As has been stated a couple of times, this is the start of the 100th birthday celebration of Dr. Norman Borlaug. His work in Mexico began in 1944 on a joint Rockefeller Foundation / Government of Mexico to improve the yields of a number of crops including wheat and maize. That project grew to become the organization that I represent, the International Maize and Wheat Important Center, known globally as CIMMYT. Well, next March in Obregon in the Mexican state of Senora where Dr. Borlaug did the work that led to the Nobel Prize, we're going to continue the celebration for almost a full week next March.

So we begin with our partners at Cornell University with the technical workshop, the Borlaug Global Rust Institute Technical Workshop. Then we have a field day on his birthday, and that's appropriate because he spent so many days, weeks and years in the field. We're also going to

have a birthday celebration that day. And then we're going to have a multi-day Borlaug Summit on Wheat and Food Security. So there's more information about this upstairs on the third floor. CIMMYT has a table, along with a number of other exhibitors, so we're up there. We have a lot more information about this, but I would like to get this on your calendar, on your radar screen. We'd love to have you join us in Obregon next March.

Another thing I wanted to announce in honor of Dr. Borlaug - CIMMYT is starting the Borlaug Pioneers. It's a fellowship program for PhD's from around the world. We're going to have a program that provides not only training but project management, leadership training for these PhD's in his honor.

So I appreciate the time I was given today by the World Food Prize. Again, please come on upstairs when you have a chance to see us on the third floor. And thank you very much.

Bian Li

Thank you very much, Scott. Now I'd like to invite our first panel up for our conversation on Collaborative Best practices Across Geographies. And I would like to invite the panelists to take the stage, please. Thank you.

And first I would like to introduce the moderator. Marcos Fava Neves is an international adjunct professor, School of Business at the University of Sao Paulo in Brazil. And he is a renowned expert on south to south collaboration. In addition, he has a special connection to the World Food Prize. He's on the board of the International Food and Agribusiness Management Association, IFAMA, and Ambassador Quinn spoke at their conference in the spring; and we have a mutual friend via one of our other speakers, Thad Simons, as well. So we're very pleased to have Marcos moderate this session. We're looking to explore how we facilitate better technical, research, educational exchange and technology transfer between southern countries. And we have convened a distinguished panel of experts from India, Brazil and Africa.

So with that, please help me welcome Marcos Fava Neves, and he will introduce the other panelists. Thank you very much.

PANEL:

SOUTH TO SOUTH: COLLABORATIVE BEST PRACTICES ACROSS BORDERS

Panel Moderator:

Marcos Fava Neves

International Adjunct Professor, School of Business, University of Sao Paulo (USP)

Panel Members:

Deshpal Verma Professor, The Ohio State University

Beatriz Silveira Pinheiro Former Director General Strategic Studies and Capacity Strengthening
Division, Brazilian Agricultural Research Corporation (EMBRAPA)

Ishmael Sunga Chief Executive Officer, Southern African Confederation of Agricultural
Unions (SACAU)

Marcos Fava Neves

Good afternoon. It's a big pleasure to be here in such a nice event with a lot of friends and people dedicated to improve food production. Dr. Borlaug is also a very famous person in Brazil and admired because of his work, so to be here, it's a pleasure for all of us. We're going to have a very nice panel, I'm sure of this, because of the diversity of the persons that we have here.

Let me start introducing by Mr. Ishmael Sunga. He's taking care of the Southern African Confederation of Agricultural Unions. He is based in South Africa, a more detailed curriculum of himself you may find in the brochure that was given. And I just realized he told me he is... I have to wake you up after a nice lunch, so he told me he's the owner of the table mountain, because he lives near Capetown, and that's his ownership. So we have South Africa, and he's originally from Zimbabwe, well represented here.

Then we have Mrs. Silveira Pinheiro who worked a lot of her life in EMBRAPA, and she's going to give us the experience of EMBRAPA, an institution that Dr. Borlaug had strong admiration and participation along his life. And she told me that she's the owner of the Christ in Rio de Janeiro, so you see that we have very, very powerful people over here.

And then Dr. Verma. He is based in the U.S. for a long time, but he is the first person to isolate a plant gene, so he's just in front of us here, so I'm going to ask for an autograph further on. Working at Ohio State University, and he's originally from AGRA in India, so you can imagine what he owns - the Taj Mahal.

So what do I own? I don't own anything here. I'm just a Brazilian professor of the University of Sao Paulo. This year I'm a visiting professor at Purdue University. And since this panel was supposed to be the USDA panel, probably I'm the new owner of the USDA. So there, you may keep this here.

So after this introduction to our panelists, you received one page in your... That's the way I like to resume what I see or what I find in the places that I go, and this is a little bit of my warm-up for our discussions over here in the next 45 minutes. So it's a triangle. I'm trying to make things a little bit simple in a triangle where we have in one part of the triangle what was discussed here during these days, which is consumption. It's very easy to see the triangle. On the left side of the triangle you have the resources, and this is what we're going to discuss more in our panel. And on the right side we have the risks and uncertainties.

The message that I want to give at the end, I will already give it now, is that I'm very positive towards the future of our industry, of our farmers, because the triangle seems to be good. The best thing of the triangle is the consumption, because we want to include more people, we want more trade, we want more farmers coming to market; so the consumption side of this triangle, I think, most of you agree, that will be very, very positive in the next 25, 30 or 40 years.

Why is it going to be positive? So, since they gave me three hours to speak now, I'm going to use all the three hours. It's positive because of the eight factors, effects that I listed over there. So we know and we realize the growth of the population - nine billion people in 2050. We know that we have around 90 million people moving from cities, from the rural areas to cities every year. So China gains one city of New York per year; it's incredible. The city of Mumbai, I heard it's growing 400,000 inhabitants per year; it's incredible, this movement of people. And when they move, you know better than I do that the consumption habits change and there's more pressure towards packaged foods, processed foods or value-added foods as we're going to have here in our discussion with Dr. Verma.

Population without income doesn't mean a future growth for food production, so this is one of the most important issues for us to discuss. And income growth is happening in several parts of the world, and I do believe that we are going to get in a better shape in the coming years, and this income will continue to grow. So that's over there in economic development, income availability and distribution.

I was following... India just signed the food security bill, I was reading the newspapers. And this food security bill - which may be added in our number 4 as income distribution or number 5, better, government programs - just this bill, that was signed for food distribution to the very, very poor people, you know the amount of tons that will be consumed - it's almost 70 million tons of grains in one year, per year, because of this bill. So you can imagine 70 million tons of grains - it's almost the Brazilian soybean production of one year or the U.S. soybean production.

So there's a lot of things going on, and it's much more complex for us to follow. When I learned the concept of agribusiness, back there you'll remember created in 1957 by John Davis and Ray Goldberg, at the end of the chain, the traditional chain, we had the consumer. So it was easy to see - the consumer was there. But then we created several new consumers at the end of a traditional agricultural and food chain.

Who do we have now? We have the cars helping to consume what's being produced by our farmers. So our farmers now have a new market which was created - that's the market of the tanks of the cars. It's good. When this was signed, it was a huge income transfer from the oil business to agriculture. I could see this in Brazil. We did several studies where we've seen sugar

cane industry being built in very small cities. The economic and social indicators, environmental indicators of these cities, you can't believe what's happening in terms of that generation – employment, new business, new companies created.

So we have the biofuels, bioplastic – the bottle of Coke, for instance, one third of the bottle is plastic coming from cane. We have here in the U.S., if you got some hotel chains, pay attention and visit their websites. You're going to see part of the forks and the plates, they're coming from rice, they're coming from potatoes. So a new market – it's the plastic market.

And then we have the electricity market with some nice initiatives to build localized infrastructure to burn biomass or to burn ethanol or biodiesel and cogenerate electricity. So if you are in very poor areas to the world, it's like building a new country today. If you're going to build a new country today, you don't need anymore to fix expensive telephone lines – we go directly to the mobile phones. So we don't need anymore to fix expensive energy electricity transport systems, because it can be generated in local communities and consumed over there. And this is all markets now for farmers.

So there's a lot of other things going on. I've seen a nice presentation 15 days ago of a professor telling that farmers now will conquer the medicine and the cosmetics industry also. It's going to be more part of the food business than the medicine business with the nutria-cellulose, nutria-cosmetics and all these types of products.

So I think most of us agree here that when you look at this triangle, the upper part is positive – the words, creating income, including farmers and doing a better trade, a better distribution of income in the world via the growth of production of our farmers. I think this is a dream for Dr. Borlaug.

When we look at the left side... So to be very simple and very clear here, there is a huge opportunity in terms of consumption. Who's going to win this opportunity? So we have here South Africa, India and Brazil. Who's going to win? Who's going to take more of the growth of the cake? Who's going to be the winners? The winners in my opinion are the countries, the states, the regions, the cities or the companies that manage better their resources. Because it's known we should do more using less.

And if I have to do a list of resources that should be managed in order to accomplish the food production, the resources are there. So it's land and soil. So what's going on with the soil, for instance, in China, with the contamination? We have several specialists here telling us what's going on, the lack of soil for the growth needed for the Chinese consumption going on. So who's going to produce the food if the income is well distributed, to the two million new inhabitants that we have in India every month? Every month two million new people added. And if there is income over there..., so how is this going to work?

Water – where's the water located? Do we have it? What's the availability? What's the cost? Water is being charged now for agriculture. Agriculture competes with humans in certain areas of the world, so that's a challenge here. The climate change that was discussed this morning and the weather.

Labor – people in education. And if you want to have my opinion about Brazil, probably number 4 is the worst that we have today. It's for agriculture, for farmers, and every talk that we do, they're always complaining about labor, the quality, availability of people because of almost full employment in the country. So it's becoming very expensive. And our labor loss – one of the worst in the world in terms of the needs that you must provide for labor. So it's very complicated. We lack the investment of education that was needed. And I know this is also a problem in South Africa in a recent visit over there.

Do we have fertilizers for all this growth? So we need some more innovations. Do we have energy? See the revolution that's going on here in the U.S., and I could feel this revolution this year living here with the shale energy coming from shale gas. The change is incredible. This is shifting – some industries moving back to the U.S., because now it became much more competitive, its energy.

Research and development, information, all the revolution towards the big data that we are just touching it. So if you can imagine a combine today harvesting and monitored by satellites, the amount of data that they have of all our farmers – it's incredible, not still use it yet.

So there's a lot of other factors. I don't want to, let's say, use all our time here but just pointing out one of others. Here credit, insurance and interest rates. I remember our colleague this morning talking about insurance costs. So we've seen last year a huge drought in the U.S. I've never seen the farmers so rich as they are today. So that's the situation, because of insurance working, so they have the resources; they are there.

Institutions – the rules of the game that we don't see in some areas. Some areas... regulation, all these kinds of things, very complicated, a lot of transaction costs being added to our food chains, extracting money from our farmers.

Governments building these regulations - we have some countries that are very well managed nowadays, so you can see the growth examples – Columbia, Peru with a huge growth going on, Chili, Uruguay. Some of them lost a little bit, the track like Brazil in terms of development. We are performing well in agribusiness, but that's unfortunately the only thing that's performing well in the country.

Transport and logistics, storage capacity – how could we forget the investments in these items here? And who loses money with this – the consumer or the farmer? It's incredible what's going on.

Farm management, business sophistication, and chain coordination. So these would be, let's say, the resources. And to do the complete analysis, we must talk about the risks or uncertainties, and you know all of them – it's the political system, economic system, new diseases, the natural system, the consumer behavior and changes, and technology that's coming on.

So that's the way I would like to kind of summarize a bit this opening to keep you all awake. You have a copy of this chart, so you can follow, and we're going to in our panel discuss about this chart over here. So I'm going to start asking some questions to our panelists. They're probably questions you may also have.

PANEL DISCUSSION

Marcos Fava Neves

The first issue that I want to address, I think it's very important. I'm going to ask Beatriz Pinheiro from EMBRAPA, so she can tell a little bit more the role of EMBRAPA in Brazilian development. We exported in Brazil food and agribusiness exports in 2000 worth \$20 billion. In 2013, \$10 billion per month. That's the change that happened, thanks to several good ministers that we have, Mr. Roberto Rodrigues is here, Allyson Paolinelli, also has the prize. They are here, a huge work. So I think EMBRAPA did a nice job, and I will ask Beatriz if you can give us a little more comments about EMBRAPA, please.

Beatriz Silveira Pinheiro

Thank you, Mr. Chairman. Hello, everybody. It's a pleasure to be here. I thank you so much for the invitation to participate in this panel and especially to give some information about Brazilian culture and EMBRAPA. First I would like to correct Marcos a little bit, because it is not only EMBRAPA. I think that the major drivers of the agricultural development in Brazil are... first of all I would say that the adequate public policies, and here we have two ministers of agriculture, Mr. Paolinelli, Mr. Roberto Rodrigues, which are pretty much responsible for this huge development in Brazilian agriculture. We thank you so much.

But on the other hand, another thing that we have, and probably in some other counts would find the same kind of expectance and the same kind of enthusiasm, is the entrepreneurship of our producers. This is something that made a big difference. Thinking about the Cerrado land area, the savannah, Brazilians have learned a way to poor soils, poor fertility and distance from the consumer centers at first when Brasilia had just been settled in. So all those things happened together.

And thirdly, I'd point out the enthusiasm into agricultural research, to government correct incentives and the infrastructure was built up in the early 70s, both putting up EMBRAPA and also construct international research system comprised of EMBRAPA, the state institutes and to universities.

So I think all those things put in motion this huge development of Brazilian culture. Nowadays you could use about 185 million tons in an area which is only 37 million hectares, no 52 million hectares, so thanks to the increase in productivity in which of course agricultural research has a lot to do with it. Without research and without the adequate money into research, wouldn't go anywhere.

And so I would say that this huge revolution has caused a very high impact upon production and separating the lack of food in the country, which was very common in the sixties – we had been importing food and at the same time it increased the price of the food to consumers 50%, which is considering the period from 1975 to 2010 or something.

So I would say that all those things create the possibility for the country to be exporting food, at the same time generating the whole progress into agribusiness, Brazilian agribusiness.

Marcos Fava Neves

Thank you, Beatriz. Let's take our flags now to South Africa, because in Africa you have the same problem that we have in Brazil, linkage to infrastructure. A lot of money is lost from our farmers, from our chains. This year it was measured. Because of a lack of infrastructure of ports and roads in Brazil, our farmers or the chains lost almost \$1.6 billion U.S. dollars. So this was income that was lost. So how do you see the development of Africa in terms of infrastructure? What's going on in South Africa? Do you see some modern public-private partnerships or transfer of public assets to the private sector? How is this evolving? If you can give a bit of your experience to facing this problem.

Ishmael Sunga

Thank you very much for inviting me to be on this panel. As already indicated, my name is Ishmael Sunga. I work for the Southern African Confederation of Agricultural Unions, which is a membership-based organization looking after the interests, common interests that is of our primary producers through the international farmers unions in Southern African countries.

So my presentation will talk in general, not so much specific about South Africa, this vexing issue of infrastructure, which is a key, one of the most pressing impediments to agricultural growth in all its dimensions.

As we are aware that, without the ability to move inputs to where the farmers are and the ability to move outputs from where the farmers are to where the markets are, agriculture becomes complete unviable. This is the kind of situation that farmers in Southern Africa, particularly those who are located in the Hinterlands, and more so whom are the smallholder farmers, face on a daily basis.

Just give a brief illustration. Even for the large scale commercial farmers, I was recently discussing with them at a congress last week, and they singled out transport and logistics as the biggest cost contributor to the value of the product. Examples were given that it takes quite a few weeks to move products from America via

the oceans and the land in Durban. It could be landing at \$20 a ton. But when it move that stuff from Durban just maybe 300 kilometers into South Africa, the cost of moving that short of distance and the shorter period of time is maybe 300%, get it at 60. And that adds to costs, costs for the inputs that are coming into the country and into the region that are very critical, such as fertilizer and chemicals. That also adds to costs of exports, process or primary, that goes outside the region. The ultimate price that we have to pay is that we remain uncompetitive in the world market, and being uncompetitive, that will retard agricultural growth.

If I take this down to the ordinary smallholder farmer, the costs of the last mile or the first mile is astronomic, which makes agriculture completely unviable. And one wonders why smallholders sometimes choose to practice agriculture when it is completely unviable as I would imagine if one takes proper cause into account. The reason is that the financing mechanism for smallholder agriculture is not necessarily through the market. It is financed through various sources. As a result, it does not respond to market signals. If it was being funded via the commercial sector and it takes into account all its costs, they have summers where they have stopped producing for the market but producing for themselves - which is not a very good thing to do.

But ultimately, just to summarize, basic infrastructure is very crucial. I'm talking about basic roads here, talking about feeder roads apart from trunk roads. We're talking about basic communications infrastructure, basic energy infrastructure, basic socioeconomic services, all these things that need to be fixed. And in my view, if one wants to borrow from what other sectors have used, this is where the public-private partnership model is going to be useful.

We could look, as an example, in to what have been in the runner-up to the World Cup. As you are aware, South Africa had hosted the last World Cup. There was a lot of construction for stadiums, for roads, railroad lines and all that. And the transit model was used for that kind of infrastructure. And then just wondering why, given the need for dams, for roads, for rail lines and all that, why the same concept is not finding practical use in agriculture?

I think we need to look at what other countries have done in harnessing particularly infrastructural development, in harnessing the public-private partnership model to be able to come to deal with the problems that agriculture is facing. No amount of policies

are going to help. No amount of price incentives is going to help if it does not sort out the basic infrastructural problem.

Marcos Fava Neves

Well, linkage to infrastructure, which is a challenge for most of the countries, and it's also paid by the consumer, by the farmer, as they lose money, they lose income. But there is an idea always that we discuss in the supplying countries, that is the idea of processing more the food close to where it's produced, trying to create some value of the, let's say the first or second industrial stages of the product. So I see that this is one of the issues Dr. Verma is working with, so I would like to ask you to address a little bit more the challenges that these countries, instead of carrying all this weight, if this would be more processed in, say, the origin.

Deshpal Verma

Thank you very much. Let me thank the organizers who asked me to be part of this panel. I'm a molecular biologist. For the last 40 years I have been working on basic problems in plant biology, starting in '73 to isolate the first messenger, finishing now the recent work, how the environmental signals control the growth of the plant.

So all this time really was more focusing on the basic machineries. In the last six years or so, I had the opportunity where the Planning Commission of India asked me to look at the Indian agriculture at large. And being an outsider, I took that challenge that here is a country which is growing leaps and bounds, both in population as well as in economy.

So the Green Revolution clearly helped India, and what you see now, that India is actually self-sufficient in terms of food production. But if you dissect the Green Revolution, it really had three components: the new germplasm, as Dr. Borlaug was instrumental in developing; irrigation; and fertilizer. These three imports have given you significant productivity, but that productivity is now plateauing. In most of the developing countries you are not growing, producing more, you've almost plateaued there.

So a farmer who is average farm size right now is about 1.5 acre in all the developing countries, so this is really subsistence farming. What they will produce from that land is not sufficient to survive because their needs are growing exponentially. A farmer wants everything - they want a cell phone, they want television. How is it going to come? Where is it going to come from?

So I looked at this big question of how to add value to the primary agriculture, enhance, create more value for the farmer? And in

doing so I heard significant input from more than a thousand people across the country, including Dr. Suri Sehgal, whose foundation is here in Des Moines. What I came to realize, that the current subsistence farming is really at a crossroad, because the younger generation does not want to continue where the parents did. They want to run away from the farm, so who is going to do that farming? That farm does not produce enough to meet the demand of that farmer.

So you have really a serious problem at hand: On one hand, how to continue productivity, on the other hand, how to create more value. Hence, that is where the food processing comes in play. Currently in India only 3% of the food is being processed, while 30% of the food is being wasted during the postharvest situation. And when you look at that situation, how you can add value, then you soon realize - you just had a lunch... How many products were there on the plate? This is only for food. Soy actually produces more than 500 products out there. So you can double up 500 industries based on soy alone, and same is the case with corn. But it isn't only two major crops.

When you talk about the agriculture situation, you have to look at what can be grown in the same limited land whose value is twice, three or four times higher than the simple corn or soybean. So whether it is a medicinal plant, or whether it's an oil-producing crop, or whether it's a crop for fiber production, or simply looking at what mass you can produce on that land and how do you add value to it through genetic engineering, making industrial enzymes that are produced in the crop, or certain drugs that can be produced in those plants. So you have to look at a big picture.

And unless we start educating the farmer how to add value to this process, you are not going to generate enough income for that farmer. So the future of the subsistence farming is really very bleak. So how do you solve that problem?

One way to solve the problem is to use the digital technology where you keep the farm as it is, the ownership of the farm but only on the computer. And then you have a hundred or two hundred farmers join together and make a large farm out of that, where the modern practices can be deployed, both for production as well as processes.

Secondly, you have to really educate people, that is the scientists that are sitting on their so-called ivory towers don't want to get their hands dirty. They really have to look at - how do you build new entrepreneurial people out there who can use the bio-

resource as a material on which they can build an industry out there. So there is a win-win package that has to be created.

So the report that I generated for the government of India, which took quite a bit of time and eventually it was approved through various ministries – I called this whole area as secondary agriculture, because it is value addition to primary agriculture. That report was funded last year in the national budget for \$2 billion.

However, to my surprise, what I found, was that there are not many takers for that \$2 billion. Why? Because to take that money you have to write proposals. You have to write what you're going to do. Where is the technology? So thus the real challenge begins when money is there, now what to do with the money. So money alone does not solve the problem – that's what I learned.

What is really required is people who understand these dynamics, understand the technology and the entrepreneurial people who want to build business based on the bio-resource so that you can now build the new industries and capture value from the agriculture.

Marcos Fava Neves

Thank you for this insightful answer. It's a challenge for most of our countries. In this south/south bridge, the south/south cooperation that's increasing, Beatriz, can you just give a quick comment about EMBRAPA's activities in Africa, instruments for cooperation, quick comments before we wrap up?

Beatriz Silveira Pinheiro

Many countries and also Brazil through the minister of foreign relations have been doing cooperation since a long time ago. After President Lula's visit to several African countries and to Latin America, this kind of interest has been growing up even more. And because of the technology adapted to tropical conditions, the south/south cooperation is, I would say, from Brazil, South Africa, India and other countries very much or more easily adapted, of course, to technologies generated under temperate conditions.

And EMBRAPA has been working with the support of several international development agencies and several institutions, international centers too, in several countries in Asia and Latin America – two different types of projects. The first one would be the structuring projects in which it is much more than technology transfer; it means people would be there doing work together. And some small projects are scattered throughout Africa and Latin America. And a new, two years ago we started to do it. It deals with the innovation marketplace. And so a very interesting

project or program in the sense that research institutions of African and Latin America receive money from the agencies, Rabobank, FAO, and Bill and Melinda Gates to develop research together. I will not be detailed on that, just finish.

Marcos Fava Neves

I'm sure you are going to be available if they have more information. Just a quick last comment. Mr. Sunga, we had during our lunchtime a nice discussion about how do you see policy reforms and these kind of things that are very important to the south/south connection. So can you give just a quick comment, your views or your hopes, the words of policy reforms and more trade coming from agribusiness distributing more income. How do you see this?

Ishmael Sunga

Thank you. I believe policies perhaps, an area of policy, rather, is perhaps the single biggest high-impact area that development support and south/south cooperation needs to focus on. I say this because I think it touches on everything about agriculture along the entire chain. It touches about all the issues that agriculture is facing with respect to the input side or to the market side and on farms there are issues.

So investing in policy becomes important, and getting experience from those who have implemented policy to address the... constraints that agriculture faces is important. I'll give an example, that policy can unlock constraints that relate to investment in infrastructure. Policy can unlock issues about finance. Policy can unlock issues about markets. We're talking about trade policies; we're talking about monetary and fiscal incentives. It can unlock research and technology.

So if we can introduce innovation in how we use policy as an instrument which addresses a multivariable situation, I think that is to me, if one was, if I can use analogy, was a jet fighter – not that I know anything about jet fighting – but if one was really trying to look at where to drop a bomb to cause the greatest damage, I would think that the policy cluster would be the one that one would target and aim for, because it can touch everything if it is really used very creatively.

So policy, policy, policy in south/south cooperation becomes important in that sense. And maybe not even south/south cooperation. It can also extend our side of south/south cooperation. We have read about Nigeria, how they are using policy to really drive agricultural development. Just a small policy change on land reform, as an example, can introduce enormous benefits to farmers and all other value chain players, giving reasonable insurance that if you invest on a piece of land, you are

going to be secure for the reasonable future. So that would be my quick comment, maybe a bit long – policy, policy, policy.

Marcos Fava Neves

I'm going to hand the last quick comments to Dr. Verma before I wrap up our discussion here.

Deshpal Verma

What I wrote for India on secondary agriculture – a copy of that is on secondaryagriculture.org site, so you can download it; it's a PDF file. That report is equally applicable to all developing countries. You just have to plug in your crop or whatever the conditions are there in that country. So it's a very generic kind of document which applies to all farmers, basically, and all the different countries that are currently facing this problem. Thank you.

Marcos Fava Neves

Well, I think coming to this type of conference, as always, is a possibility of learning, learning and learning. So we had the chance to have lunch together. We're going to keep in touch, networking, a lot of new contacts. Can you imagine, every conference that we come, we increase our amount of work, if this could be possible. And the other feeling that I have when we come to events like this and we share these experiences is how ignorant I am and how many things are still there to be studied and to be learned. And I think this is the philosophy that we have in this house, in this event here. So I would like to thank our panel, and thank you all for coming to this first session.