

**SECRETARY ROUNDTABLE: SHARING AGRICULTURAL KNOWLEDGE TO DRIVE
SUSTAINABLE GROWTH**
October 13, 2011 – 9:30 a.m.

Hon. Thomas J. Vilsack – Secretary of Agriculture, United States

Ken, thanks very much. And let me take this opportunity to again thank Ambassador Quinn, the Ruan family and the Borlaug family for giving us this wonderful opportunity to meet each and every year at the World Food Prize. This is the 25th anniversary of the Prize, and certainly the Laureate Hall that Ken and the Ruan family and the Borlaug family were so instrumental in developing is really worth coming to Des Moines to see. So, congratulations to all associated with the World Food Prize.

This is an opportunity for us to talk briefly about the enormous challenge that we face that is the constant conversation at the World Food Prize, and that is that there are 925 million undernourished people in the world today. And the reality is that, over the course of the next 30 or 40 years we'll see the world population grow to well over nine billion people, which, combined with improved diets, will place a great deal of emphasis on the capacity of the world to increase agricultural productivity.

Some have suggested it will take at least a 70 percent increase in agricultural productivity to meet the needs of a growing world population. When you add to that the enormous challenge of energy production that will be required, combined with the impacts and effects of climate change, you can see the challenge before us is fairly significant.

The United States is committed to trying to address this in a cooperative and collaborative way. At the U.S. Department of Agriculture we have focused on three core principles as we try to address the issues of world hunger.

First and foremost, we believe very strongly in the need to continue innovation and the important role that innovation in terms of increased productivity will play. And our topic today focuses on research and sustainability, and certainly research is the key to spawning innovation.

Secondly, we do not believe that increased productivity necessarily has to come at the expense of our natural resources. As many countries, including the United States, are facing extreme weather conditions, we have to look for ways in which we can deal with climate change, and impacts of adverse weather and still be productive without necessarily sacrificing the quality of soil or the availability of water. And certainly water is a critical issue in so many parts of the world today. We obviously have to look for ways to improve agricultural production processes so that we utilize less water as time goes on.

And finally, as the U.S. looks at its collaborative and cooperative effort, our view is that we have to work based on what countries are most in need of, which is to say that we want the countries to lead this effort. It's not a United States led effort if we want to be a collaborator and a partner.

Within the context of those three principles, we've established with the State Department and the USAID and other federal agencies of the United States Government a Feed the Future Initiative, which is really designed to focus on increasing the availability of food, making that food which is produced more accessible, and making sure that it's properly utilized.

And within the Feed the Future Initiative, each department, the State Department, USAID and USDA look for ways in which they can focus on core competencies. And in our particular area, USDA's area, we see that we have basically three core competencies.

One is the development of market analysis and data. We think that that's very important to be able to have a clear sense of precisely what you are producing and how much you're storing and how much you're using and things of that nature.

We also believe that we have a core competency in working to create in-country capacity, particularly as it relates to sanitary and vital sanitary standards and regulations, as well as trying to impact and affect opportunities for countries to trade. And we think this is an important wealth creation strategy, the ability to trade what you grow and do best; and so we want to develop the capacity within each country to be able to maximize their trading opportunities.

And finally, we see a critical way in which the USDA can help with research, both internal and external to USDA. Within our internal USDA we have the Agricultural Research Service, which is providing very cutting-edge research in a variety of areas, including increased food productivity, increased protection of livestock and crops, as well as a variety of other areas of food safety and nutrition in particular.

We also have an external program. Our National Institute of Food and Agriculture works externally with our partners, primarily land grant universities, to further research. And it's there that I think that there are great opportunities to work with our partners in Africa and Asia, South America and around the world.

We have a number of examples that I can share with you during the course of our conversation today. For example, in Mozambique we are working with the ministry of agriculture and two local universities on a multi-year aflatoxin control project, which is extremely important. This project will develop a natural biological control agent, which we think will be effective.

In Tanzania we're working the southern agricultural growth corridor to develop strategic coordination and planning as we create public/private partnerships to address food security issues in Tanzania.

In Ghana we're working on the issue of post-harvest loss, which we know is a critical issue. And often in many countries you can lose up to 30 to 40 percent of your harvested crop just simply because we don't have the appropriate storage facilities.

Let me finish, because our time is short here today, with just a plug for one additional research effort, which is the Global Research Alliance. Now 36 countries have banded together to focus on the impact of climate change, greenhouse gases and agricultural production. Our efforts within the Global Research Alliance are to coordinate research to ensure that everyone within the Alliance is aware of the research that's going on.

We've broken the Alliance into basically three major areas: crop production, livestock production and patty rice. There are two cross-cutting areas, including soil carbon and nitrogen cycling, as well as development of inventories and messaging.

We're excited about this opportunity. We think this is a collaborative opportunity to share best practices, to share research, to coordinate, integrate, to use our resources most effectively to make sure that the world is adapting and mitigating to whatever changes may be occurring to crop production, livestock production, rice production as a result of climate changes.

With that, I think what I'll do is we'll just go down the line. So, Minister, if you want to start, just give every participant three to five minutes to visit with the group, and then we'll just have a series of questions.

Hon. Kwesi Ahwoi- Minister of Agriculture, Ghana

Thank you very much. Thank you, Secretary. I think Ghana's agricultural development typifies the African situation. And what we're trying to do in Africa is to catch up, address the productivity gap, which is a major challenge facing us in Africa.

Irrespective of that, whatever Ghana has been doing, as I said yesterday as I attracted quite international attention, and Ghana is in probably as a model. I do recall that when I addressed the FAO this year in June, we did comment on the fact that population increase in Africa will create bigger programs for us in the future unless we address this productivity gap.

Notwithstanding that, three consecutive awards of international organizations have been given to Ghana. I want to mention in 1993 the Africa Prize for Leadership for Sustainable End of Hunger was given to Ghana. In 2000 the Agricultural Medal Award was given to Ghana. In 2011 the World Food Prize has been given to President Kufuor and President Lula, which indicates that Ghana probably is doing something with new things.

The water practice we are doing has been based on small-scale peasant agriculture, which is what created the productivity gap that we are talking about. And therefore we have come up with a strategy to move away from small-scale peasant agriculture to what we call accelerated more organization and commercialization of agriculture.

We believe if we adopt this approach, our small-scale farmers would then learn and acquire the knowledge that is needed to increase their productivity. Otherwise, if we go along the route we have been going up to this time, Africa's peasant agriculture will remain the same and poverty will not be eradicated. So this is what we are working towards.

Particularly in Ghana we're doing this by placing setting interventions that so far have resulted in quite responsive, some responses from the private sector and the farming community.

Every year the first Friday of December is a national holiday; we call it a Farmers' Day. It's a national holiday dedicated to the honor of farmers and fishers in Ghana for their contribution to national development. On that day the president of the country awards the deserving farmers and fishers with some prizes, including finished, three-bedroom houses. This event takes place across the whole length and breadth of the country, in the national capital, in the regional capitals in all the 170 districts. Farmers are recognized for their contribution.

This has actually brought about a lot of attraction to the youth especially. And yesterday I did say that I came along with me one such youth who won the award in 2009, the best farmer in Ghana. I think he's somewhere in the audience here, Mr. Davis Cabal, 36 years old at that time. But he worked hard and earned this national award.

The other thing that we have in place is mechanization. Our agriculture has been basically the rudimentary type of agriculture, using the hoe and the cutlass, and we think we need to move away from that. So when we talk about more organization, we're talking about mechanization process, which means that we'll have to use the modern means of production - tractors, combine harvesters.

Along the whole chain of production, we'll need to apply the mechanism that reduces the drudgery of farming. It is this drudgery that is driving away the youth from engaging in agriculture, from taking over from their parents, as it were. And we believe that if we give them a clear signal that we are moving away from the traditional approach to agriculture, we could attract the youth into agriculture and sustain our deliverables.

The next thing we have done in Ghana is to encourage the farmers to apply fertilizer. In the past we were doing organic production. As a matter of fact, Ghana's cocoa over the years never apply fertilizer until we realize that we are falling behind. And competitors like Brazil and the Ivory Coast were overtaking us because they were applying fertilizer, so we had to.

And I'm happy to say yesterday President Kufuor mentioned the fact that we have grown from 150,000 tons in 1983 to about 720,000 in 1998, so 2008, and this year we have done a million tons. Our target is to do a million tons by 2012 - we have already achieved that 2012 target.

So fertilizer application is now being made applicable to all sectors of agriculture and all levels of agriculture, whether that be small scale, medium or large scale. Everybody has access to fertilizer, of course. It's subsidized. We had to subsidize it to encourage Ghanaian farmers to use fertilizer. We are moving them from nonuse of fertilizer to use of fertilizer. If the price is too high, they will just steer away from applying fertilizer to the production.

Until we did that, Ghana's fertilizer application was something in the region of 8 kilograms per hectare when the recommended level is somewhere between 20 and a 100, and 20 kilograms per hectare. Eight definitely is a very low level of production and application, and that's why we've had to initially introduce subsidy into the scheme; but we do believe that over time we may be

able to work out an exit strategy for the subsidy that will be putting on all these direct inputs that we require so much for, for production.

I believe this will be for now. I could stop here and then take questions as they come up.

Hon. Jumanne Maghembe- Minister of Agriculture, Tanzania

Thank you, thank you, Secretary, and thank you for the organizers for the invitation and excellent hospitality.

In Tanzania the agricultural sector is a very slow-growing sector at 4 percent growth rate per annum, compared to the overall economic average of 7 to 7.8 percent annually. Yet, it is a very important sector, carrying with it 31 million people or 77 percent of all our people depending on it for their livelihood.

It also provides 95 percent of all the food that we eat in Tanzania and contributes 34 percent of the foreign earnings that we do every year. And in the year 2010 it generated 27 percent of the GDP.

Yet, the sector, being so central in relation to carrying so many people, needs quite a bit of attention, because productivity and agriculture is very low, and this is especially related to lack of use of good agricultural practices, including very low use of improved seed, very low use of fertilizers, very small, traditionally very small investments into agriculture, and the marketing system is still very extremely rudimentary.

Now, with the target of being a middle-income country by 2025 and agriculture growing at 4.2 percent, the vibrant economy is likely to not carry the majority of the people of Tanzania with it as we go towards our target year of 2025.

So as a government, we looked at it very hard and realized that we have to intervene in order to carry those in the agricultural sector with the rest of the economy.

We introduced the subsidies in agricultural inputs, especially fertilizers and seed. And in this particular year we have produced in five of the regions where the rains were good, we created a surplus that is feeding the rest of the country as well as feeding the Horn of Africa, which as you all know is very low in food at this time.

We specifically decided to introduce the Southern Agricultural Growth Corridor of Tanzania, which is a high potential land area equivalent or a little larger than the state of Italy. And as a large chunk of land, it represents varied agricultural growth conditions and suitable for a lot of different kinds of crops.

We have set aside this land area in the public/private partnership mode so as to increase investments in agriculture and also to become a model in relation to agricultural practices for small-scale farmers, medium-scale farmers, and lead larger-scale private farmers that drive the whole of the productivity in the area.

The idea is that the Southern Agricultural Growth Corridor will be divided into clusters that deal in different kinds of crops. For the moment we have clusters in sugar cane production, we have clusters in cereals production, horticulture and root and tuber crops.

In this area, typically a large farm will carry with it, will manage probably ten to fifteen thousand hectares of land, carry with it another similar size piece of land that will be work done by contract farmers who will typically have a hundred to five hundred hectares holdings and small-scale farmers who will be organizing cooperatives, agricultural societies, or savings and credit societies. The larger farmer will deal with the cooperative or the savings and credit, or the association, while the small farmers will manage their own land area.

In the last week I visited two of these clusters, one of sugar cane where two large farms growing sugar cane for sugar production are also carrying 150 contract farmers. In the investment, the contract farmers represent 50 percent of the land area, but in the last year they represented 40 percent of the earnings of the whole investment.

The other cluster I visited last week was a rice cluster where the Kilombero Plantations Limited (and I have heard that they have representatives here), they are working on a 4,000-hectare farm, and they have 260 small farmers organizing a cooperative.

The productivity at the farm for the moment is on average 3.8 metric tons per hectare, while the small farmers' average productivity has reached 8 metric tons per hectare. And the magic is that the small farmers are using the same seed that the large farmer is using. This seed comes from our own agricultural research system, and they're using the same agricultural practices, including fertilizers, irrigation and so on that the larger farm is using. But because of managing smaller-size farms, they are able to deliver 8 metric tons per hectare compared to 3.8 metric tons per hectare on the larger farm.

We believe that this kind of [public-private partnership], grown systematically and developed in a manner that is sustainable, is the way forward for small farmers improving their livelihood, increasing their earnings, and having markets readily available - because markets are the main driver in this case for productivity in agriculture.

We think that with this mode of intervention, the agricultural sector will be able to grow at about 6 percent in the next 2 to 3 years and with big focus in the development of the agricultural sector, we should have more than 3 to 4 million farmers involved in small-scale or contract farmers in this kind of model production, and this should be the catalyst that will turn around the agricultural sector in Tanzania. And I'm sure that this model could be used in the other African countries.

Dr. José Pacheco- Minister of Agriculture, Mozambique

Thank you, Honorable Secretary. In Mozambique before any meeting starting, the people, they come together. So allow me to invite us to come together.

Mozambique has got a population of 21 million people. The size of Mozambique is around 800,000 square kilometers in Southern Africa. The agricultural development policies of Mozambique believe that countries with agroecological potential should improve productivity.

Countries without a good agroecological condition should look for a light so their food shortages, which is already there in place, they have a better opportunity to overcome the food shortage.

Mozambique policy for agricultural development lies in four pillars.

[The] number one [pillar for agricultural development] is research and extension. On the research side is how to take the technology generated by the scientists to the farm. On the extension side is how we can improve the linkage between research, extension and production.

We are putting together one thousand demonstration plots so to demonstrate technology to the farmer. They can hear what the field extension workers advise them to adopt, but more than hear, they can see. So with these pillars, we pretend to move into subsistence agriculture to make agriculture as a business.

The second pillar has to do with the market and information. It's crucial to have in place the market on the chain of the production. So because of that, anything should be done to make sure that the supplies, what the farmer produce can be sold to supply the market.

And on the information side, it's very important that the farmer have information about the weather forecast, about the price, about the statistics, so they can make a decision based on the right information.

Pillar number three has to do with natural resource management. What can be done to agriculture to take advantage of the agroforestry? And some of the wild and indigenous species there can contribute to improve the quality of soils so would impact on the productivity.

The fourth pillar is traditional issues, to consolidate the best practices, but more than that, to develop sustainable public and private partnership.

With these four pillars, we choose six development corridors, from south to northern Maputo.

Number one is the Maputo Development Corridor, and this corridor, we in Mozambique, we're using the ecological condition of this corridor is concentrate on vegetables and fruits and poultry, so we can use the comparative advantage of this corridor.

Number two, is the Limpopo Development Corridor. On Limpopo, Limpopo is on the permanent river we have in the southern part of Mozambique. The rice, it's a key crop, so all efforts of concentrating and using comparative advantage of that region on rice and also on some vegetables and the crops or all the products we are concentrating on.

Three is Baroda Development Corridor. From fruits to rice and maize, it's an area where we concentrate using the comparative advantage that region offers.

Number four, you've heard about Zambezi River, the third-biggest river of Africa after the Nile and Congo. In that area with livestock and maize. It's an area with excellent agricultural condition, so we concentration on that Zambezi Valley on these products.

Number 5 is Nacala Development Corridor, from cashew nut, cotton and a variety of peanuts and cassava. It's an area where our condition offers to grow, to develop this product.

Number 6 – if I didn't forget name of the corridor. It's Lichinga Pamba Development Corridor – again, products like cotton, cashew nut and maize. They have a good agroecological condition to be developed.

With this policy in Mozambique right now, we are self-sufficient in maize and cassava. We are busy to put all the effort to be self-sufficient in the next coming ten years. And we are now exporting bananas, of course, cashew nut and cotton around the world. Our goal is to reach food security on basic staple foods and to contribute on the world basket of food security.

And I thank you.

Dr. José Graziano da Silva- Regional Representative and Assistant Director-General, UN Food and Agriculture Organization

Thank you, Secretary Vilsack for this invitation for FAO. It's very important for FAO to be here today and to agriculture developing Africa. And also to improve the international collaboration related to agriculture and food security.

I would like to elaborate a little more related to this particular issue of sharing agriculture knowledge. And I would like to start with a very important point for me, that for agriculture and food security.

We cannot start with the idea that one size fits all. There are very different conditions among the world and including in Africa. We can see here three important countries that made important progress. I would highlight Ghana, President Kufuor that is one that received the World Food Prize this year, has made a big improvement in the country with little research, taking advantage of their natural resources and in their case, fisheries that are improving, was the dam that they have a lot water, so in the south because they don't have water in the north.

But this is a particular case that the agriculture and food security need to be demand driven, local demand drive, have very specific actions locally. Let me highlight this point first of all.

We are in the Borlaug house, and it's very important to say that the Green Revolution has much to do in Africa and many countries around the world. We did not achieve even the first steps of the Green Revolution. But also it's a need to highlight that we could not go in the same way of improving the dependence of chemicals, especially fertilizer. Fertilizer became a constraint, and we need to look for other developments to avoid the small farmers to deal with the fertilizers, inputs, growing on and on every year.

We also need to look very carefully for water research. Water has become, in my opinion, the most important scarce research in the countries that import food nowadays. Water is becoming a resource competitive with human use in agricultural irrigation more and more in many

countries. Let's just start with the Denon Region in South America but also for most of the countries that import food in Africa, water, not land, is the scarce resource. So we need to improve those varieties that are less dependent on irrigation also.

One good example is that we have achieved good progress in rice. We have been working with local institutions in Africa to improve varieties that are drought resistant in Africa for rice.

Let me also address another important point that if you take a look at where we have knowledge on agricultural development for tropical areas nowadays, you will find that many mid-income countries in the south have those technologies. Let me highlight a point that the minister of agriculture of Ghana just a moment before referred about mechanization.

We need to be very careful about mechanization in tropical areas. And we have very good practice. Argentina nowadays, 90 percent of their corn and soybean production came from areas with no tillage. Zero tillage or no tillage is a very important progress in farming, because it preserves erosion and helps to keep water in the soil and also natural vegetation.

So this kind of knowledge needs to be shared in cooperation. I believe much that we can improve cooperation in the near future between different regions of the world but particularly between Latin American countries and African countries, because they are very similar. And Africa is the priority for FAO and will be the priority for FAO in the near future.

I believe that Africa is the new agriculture frontier of the world, the frontier that remains to be improved. And technology cooperation will play a very important role in this particular area.

Let me finish, saying that we need to avoid the traditional vision of international cooperation of having donors in countries that are recipients of the cooperation. Cooperation is a process that both parties learn from each other, especially in agriculture and food security.

We need to improve cooperation work both ways, from the donor countries and from the countries that receive technology. Technology needs to be adapted locally.

One of the most important global enterprises on knowledge in agriculture is EMBRAPA, the Brazilian cooperation for agriculture research. EMBRAPA has grown up based on the concept of tropicalization. EMBRAPA picks up the seeds, the machinery and practice in northern countries and tries to adapt them to tropical awareness, similar to the savanna that we have here.

So this concept, to adapt local technology and not to reinvent the wheel again, is very important. But we need to build local capacity in African countries to be able to do similar things that we did in the past in South American countries.