### 2004 World Food Prize International Symposium

From Asia to Africa: Rice, Biofortification, and Enhanced Nutrition

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## SYMPOSIUM BREAKFAST ADDRESS

### The Honorable Luis P. Lorenzo

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Ambassador Quinn, Dr. Borlaug, distinguished recipients of this World Food Prize, Dr. Monty Jones and Professor Yuan Longping. It is an honor to address all of you this morning. It is especially an important event for me for three reasons. First, my wife is here, Milen. She seldom joins me on these international trips. Second, is that I see a full room this morning, which, frankly in all the maybe 35 different breakfast engagements that I've spoken at in different parts of Asia, I've never had this many at breakfast. They usually show up at lunch or dinner.

And third is the youth that I see in the audience, the young people who are the future of this great country. And it is so heartwarming to see that you're interested in agriculture and food, because in many parts of the world, food is taken for granted, and many young people don't find it interesting or sexy enough to pursue a career in agriculture and food. In fact, in developing countries most farmer families insist that their children do not take an education in the agriculture field today, unfortunately.

But this morning, the topic will be on food, particularly on rice, and my personal experience from the private sector, moving into a commercially implemented rice program in the Philippines.

In behalf of my boss, President Gloria Macapagal-Arroyo, the Philippine government and the Philippine people, I would like to thank you for inviting me to this event. This is a wonderful opportunity for us to share lessons and insights with one another. And I encourage you, after my short talk or long talk, to please ask questions because with the youth in the audience, I am sure there are a lot of lingering thoughts about how we see the world, those of us who are young at heart and still going like Dr. Borlaug, with the secrets on his longevity in life.

But more importantly, all of us in this world are leading the world in the fight against poverty and hunger. And on that note I want to acknowledge the World Food Prize Laureates, Professor Yuan Longping and Dr. Monty Jones, and all the past Laureates before them. I am forever amazed by how their groundbreaking efforts have made rice and other food crops potent tools for the alleviation of hunger around the world, especially in my country, the Philippines.

I am grateful to Professor Yuan, as his hybrid rice technology, which we implemented commercially during my last three and a half years as a Jobs Generation Advisor and as

Secretary of Agriculture, has helped lead the Philippines Agriculture and Fisheries sector in the first semester of 2004 to its highest growth rate and level in 15 years. Please note that our country, in a thirty-year span, has doubled its population from 43 million to where it stands at 86 million today. We are trying to feed 86 million people.

I came from the private sector in the Philippines where most of my business career centered on building agribusiness enterprises, which were highly professional and globally competitive. In fact, in China if people ask me about my private professional career, I would say my greatest achievement was achieving an over 50% market share in the tropical food product the banana, since 1997, with my own house brands beating the other multinational brands at the game.

But it is through this same passion and approach of being results oriented that I have made great effort to introduce into the private sector with the primary aim of helping as many of our marginalized Filipinos as possible. Let me share with you the important strategy we adopted in addressing the great poverty problem that we face in the Philippine countryside.

The present situation facing us in the Philippines is a population that has reached the 86 million mark and continues to grow at 2.38% per year, adding almost 2 million mouths to feed every year. The number of people living below the poverty line is estimated at 30%, which is about 24 million of which the majority are still highly dependent on the agricultural economy.

Agriculture contributes about 23% of the Philippines' GDP and was analyzed to contribute indirectly to the overall economy of up to 70%. Therefore, it was evidence that mobilizing the agriculture sector was central to alleviating the poverty problem of our country. Towards this objective, we strove to adopt and implement a three-pronged strategy – namely, first to raise the productivity and incomes of the marginalized farmers and fisherfolk in the rural areas; second, to achieve food security for our large population by achieving a higher self-sufficiency in the most basic food commodities; and third, to sell and actualize hope in the rural sector who was becoming reticent in accepting a highly competitive environment they could not cope up with.

The first challenge of benefiting the large marginalized sector of farmers and fisherfolk focused first on raising their productivity through the introduction of better technology, like better seed varieties and farming practices, teaching them to be more cost-efficient through the proper use of fertilizer and chemicals and on raising incomes by improving very basic logistical support systems that would reduce transport costs to market.

The second effort to achieve better food security for the large Philippine population is to raise the local production of the more basic food commodities, improve storage and buffer stocking systems, especially those which still rely on significant importation and which can be competitively produced domestically. In this way it would protect the population from dependence on imported commodities whose supply is more often unreliable and whose prices are quite volatile.

Let me cite an example, because many of us in this room do not really understand what food security is all about. In the United States we take for granted that we have the storage

facilities and we have the food available at the supermarket shelves all year around. Most developing countries rarely have 90 to 100 days inventory of food. And because we are fortunate to live within the tropical zone, oftentimes we plant the same crop, two to three crops a year. But we became very WTO and global in orientation in our sourcing.

And when I was Secretary of Agriculture, one of the practices we developed was that over the years we depended on a lot of imported grain, principally corn and its cheap feed wheat, which replaced part of our corn requirements, which came from India. Unfortunately, last year, for example, given that we had already depended on about 20% on our national corn and feed wheat requirement from India, India reneged on their contracts because they experienced the el nino phenomena or a drought. And it was the first time I was hit with a need to find 20% of our national requirement of feed ingredients somewhere in the world, and I could not find it in my own country.

It has therefore striven me – as I was talking to the gentleman from Pioneer last night – to both have a balanced approach while we build our inventory, our storage facilities... We don't have enough silage systems, but making sure that we have access to food to feed for the livestock that depend on this ingredient and making sure that there is enough food that keeps everybody fed every day of the year. Therefore, in this way it protected, or it will protect, the population from this dependence on these types of commodities.

And the third and most difficult challenge was to raise the confidence levels of farmers and fisherfolk. Many of us in the audience, myself included, come from the rural sector. And the most stubborn and conservative of people are the farmers and fisherman. To teach them new technology and to make them change is a humongous task. Therefore, to try to do it in as compressed a time period as possible was indeed a big challenge for me. How could I raise the confidence levels of farmers and fisherfolk?

Working with them in the field through hard work and initiative, with them, helping them adopt the technologies to make them more competitive, to free them from the traditional mindset of marginal agriculture and provide for a cost-efficient and better quality finished product, thus making the end product more marketable and easier to sell, farmers and fisherfolk, I believe, could actualize that hope.

Given this three-pronged strategy we chose to adopt in addressing poverty in the agriculture sector, there was one commodity that cut across those three strategies that made the most sense in focusing our very first efforts on – and this was rice. Rice is the product which employs the largest number of farmers in my country, and rice being the largest staple food of the 86 million consumers.

Rice is the principle crop grown in our country, covering at least  $2\frac{1}{2}$  million hectares of our physical farmland, with 4 million hectares harvested because some of this farmland is given a second crop because of irrigation. It is planted by over two million farmers and easily another one million more that do not own the land. It is the staple food item of households, accounting for about 20% of the total food budget. Thus, any increase in the price of rice also drives pressures to raise wages. Unfortunately, the Philippines is not self-sufficient in rice, which is a

perennial entry on our list of agricultural imports. In fact, we made some importations from Arkansas and Sacramento last year, as we continue to buy corn from Iowa.

We lag behind Thailand and Vietnam on almost all measures for rice, such as production growth, farm cost and the price to the consumer. However, in the last three and a half years, to reverse the situation, we decided to turn to hybrid rice, and we worked with Professor Yuan Longping and his team of experts who developed the technology in China with the International Rice Research Institute, Dr. Cantrell here, with field rice, which is a local Philippine government research institution, and working with the private sector, entrepreneurs and with model farmers who committed to imbibe the discipline and total farming approach involved in hybrid rice farming.

The results were quite favorable. Across years and seasons in the Philippine experience, hybrid rice varieties have shown consistent superiority over inbreds, with an average yields – Professor said an increase of 20% – in the Philippines the increase is at least 34%, and I told him last night with the recent crop, many of the farmers have doubled their productivity.

In terms of income, individual hybrid farmers earn at least \$550 per hectare more than their counterparts who plant so-called traditional seeds. We do not have the luxury of subsidizing agriculture in the Philippines. Therefore, the markets dictate the price at which the products are sold.

Today we have six commercially grown hybrid rice varieties that are, we call them the Philippine rice research MISTISO 1, 2 and 3, and these three were developed in coordination with IRRI as well. And the other three are from private firms, the biganta variety from Bayer, the magilas from Monsanto, and a private company called SL Agritech that Professor Yuan has helped because of his Chinese roots.

We have seen over the years, three and a half years, a conversion of 6,000 hectares of what we call techno-demo or small plots, research facilities around the country, to where in this last crop being 300,000 hectares commercially grown in a short period of time. Without a doubt, the keen interest coming from the private sector has aided in our adoption of the technology, filling the void created by the government's limited financial resources.

But, of course, technology alone would not have produced the results we needed. We all know that to run anything commercially, we must combine new technology with extension work, training, marketing and credit access. Hybrid seeds were initially 50% subsidized, production loans expedited, and hands-on training and on-the-farm consultations with specialists were conducted. And to reduce logistical costs, seed-growing areas were established close to production areas, and the President pursued what she called a National Flagship Program, both for hybrid rice and what she later called a strong republic nautical highway – because being a country of 7,100 islands, we needed to improve the connectivity of these islands with a more efficient and effective roll-on/roll-off terminal shipping system to provide what we call mobile bridges across the main islands of the Philippine archipelago.

In addition, a critical organizational component was to mobilize the leadership of provinces or states, towns, cities that still had an agriculture component related to rice, to pursue

a hybrid rice production initiative. We focused on national contests organized only last March, and awards were given to nine provinces or states and 47 towns and cities. But over and above the technical and administrative accomplishments, the most significant and telling results of the hybrid rice program have been the personal success stories of the model hybrid rice farmers we have encountered and helped. Let me cite the three most inspiring of these model farmers.

One is an elderly lady farmer, Luis Lasada from Davo de Sor on the Island of Mendinau. She is 74 years old. In 2001 she was able to raise productivity on her five-hectare farm to 9.3 metric tons of unmilled grain per hectare and double her farm income, and has since become a model for about 30,000 other new hybrid rice farmers in her province. We make sure we put her in the media, to encourage the macho men in the farmers to do better.

Second is Elian Macala from a town called Lumbabaibo in Mendinau. He is special because he is a former Islamic rebel freedom fighter leader and would have probably been among the ranks of Osama Bin Laden had we not rescued him early. And he opted to help his people instead of carrying the gun, through development and is now spearheading the hybrid rice program in his province of Lano de Sur. His local cooperative has now expanded into growing hybrid rice seeds. He has a new rice mill that he put equity into and borrowed money against, and a silo system that will be set up by the end of this year.

The third is Ernesto Pablo, a 64-year-old mayor from the island of Mendora, who achieved a record harvest of 14.6 metric tons per hectare, more than four times our national average yield of 3.3 metric tons per hectare.

These are only three of the 300,000 farmers today who in the last three years bravely took the lead of adopting the new hybrid rice technology in order to better their personal conditions. Most of these farmers have their horror and miracle stories to tell, and they obviously have become better spokespersons and have provided peer role models who achieve the possible, positively changing their lives forever. Therefore, from 6,000 hectares in small laboratory plots nationwide three years ago, we now have 300,000 farmers on 300,000 hectares commercially growing hybrid rice seeds or using F-1 hybrid seeds for their hybrid program.

This progress has also greatly contributed to the Philippines achieving 94% self-sufficiency in rice this year and set the momentum to possibly achieving 97 to 100% self-sufficiency by next year.

Aside from successfully introducing new technology such as hybrid rice, we believe that sustainability depends on providing a total systems approach. Coming from the private sector, I realized that the next critical strategy was to address the big problem of rural credit, specially given the large financial constraints, the Philippine government, like the U.S. government, has with its gaping budget deficit.

To address the soaring prices of fertilizers internationally and other farm inputs, in addition to seed subsidies, we are today mobilizing small farm credit, sourced from both public and private sector funds throughout the countryside. Loans as small as U.S. \$270 will allow the farmer to acquire the necessary hybrid rice inputs to earn as much as U.S. \$1,500 per hectare per. We are aggressively adopting a locally effective credit system.

There were some gentlemen from Africa – some of the ministers were talking to me last night, because in their experience in Africa, many of the banks that are set up to provide loans to farmers have gone under. And I explained to them, I am so blessed and lucky that the two institutions I now head in the financial sector, which are the principal lending agencies for farmers, fisherfolk and small business entrepreneurs, are provided with a system that we have tried that works because we are able to collect from the farmers. We call it a self-reliant team approach, organized around 15 members per team, 15 borrowers who elect their leader. And there is enough peer pressure, and that leader has 25% of the interest collected as his or her incentive to make sure that loans are collected. It has improved repayment capabilities, and through this credit system we have been able to encourage the upgrading of rice mills, storage facilities and other direct market distribution to rice consumers.

Therefore, through the priority focus we have given new agriculture technology and rural credit programs, we hope to sustain the significant progress of the Philippines towards more competitive agriculture achieved over the last three years. As Presidential Advisor for Jobs Generation Today and as head of the government's rural banking arms, I am personally asked to oversee these programs. Our mission has only but begun, and today we are endeavoring to continue to replicate the hybrid rice experience to other basic food commodities, such as corn, livestock, poultry, coffee, various fruit, fish and other aquatic products such as seaweeds and vegetable oils. These are products which we have identified and we believe can both meet our local food requirements and eventually be exported competitively

In conclusion, I would like to make a passionate appeal to our distinguished participants in this conference today, that in your enthusiasm to develop new agricultural technologies, please give priority and central focus to its practical, commercial application, especially for the developing world.

Sadly, technology has increased the divide between the haves and the have-nots in the international family of countries, even as we try to include the have-nots in the future of the world. This divide, if allowed to increase, can only result in greater tension, conflict and the need for more spending on what we see sometimes as battles or wars that are not necessary. Through a renewed collaboration to use technology on improving food production and security for the developing world, we can be instrumental in slowing reducing this divide. Agriculture and food production in the developing countries are improving, yes, but not fast enough. Especially in this age of information technology, both poor and rich countries have access to media, and many, many people in my country, especially the poor who see on television, ask me why they are not getting included in the benefits of technology, in what will enhance their income-generating capabilities.

There have been very significant local initiatives made by developing countries, such as the Philippines, towards adopting these new technologies. But the need for continued massive international exchange and support is even more critical today than ever before. We need to keep crossing borders in the spirit of service – for there is one lesson I have learned since crossing over from the private to the public sector, and it is this: At the close of one's life, it matters not how much we have been honored, for ultimately our lives will be measured by the number of lives that we have helped and touched. Having seen the labor of our laureates, Dr. Yuan Longping from China, and Dr. Monty Jones from Sierra Leone, bear fruit in my own soil of the

Philippines; and combined with the brave efforts of my own people, I am proud to say that they have left a lasting legacy of service that will not be forgotten.

| mank you all most w | armly for allowing me | to snare our Philippine | e story. Good morning |
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# **QUESTION AND ANSWER SESSION**

# AMBASSADOR QUINN

Mr. Secretary, that was wonderful. And to bring your experience from the business world, the practical results of what you've achieved in the Philippines, I know, has touched everyone and inspired them all, so thank you again. We have time for some questions. We have microphones around, and Secretary said he especially likes to have questions from the students. So let's show some hands, and here's one right here.

# [Inaudible question]

### LUIS P. LORENZO

Definitely. In fact, working between IRRI and FILRICE in the Philippines, we've got a few lined up. And I was just explaining to three gentlemen from the Philippines who are involved in this bioforum that's going on here right now, I said, I'm tired of having to defend the whole community publicly. Europe, the Green Peace Movement, is very strong, and I think they have been effective in communicating the so-called demerits. And in fact I have an interesting anecdote. Last year early in the year there was a group of these people who decided to stage a hunger strike in front of my office. And after about two weeks and they had not been brought to the hospital yet, I did some sleuthing and found out that they were being fed by dextrose in the evening, probably dextrose that came from corn fructose.

Anyway, putting that aside, I'm very keen, because I believe following Dr. Norman Borlaug's Green Revolution, the next revolution in food really is both the nutrition aspect and using biotechnology in a more extensive way.

# **QUESTION**

How do you see the role of Filipinos in agriculture? And do you think in the future there will be as many children? Well, when they grow up, do you think they'll be as interested in agriculture as they should be to feed the people of the Philippines?

## LUIS P. LORENZO

People around the world, rich or poor, have very simple needs and wants really when you go down to basics – a better future for their families, education, through education, through opportunities. And we have a very sad story in our country because we have 11½ million of our countrymen now living overseas, working overseas in different countries of the world. Inasmuch as it helps our foreign exchange position because of their remittances, it has caused some social problems back home, because they only go home every one or two years.

I tried, during my stay as Agriculture Secretary, to convince, as farmers become more improved, improve their incomes, to have one or two of their children take an agriculture vocational program. And it has helped, because it has kept some back in the farms. Unfortunately, when you have a country whose population is growing that fast and whose land area is not that large, our basic, my basic problem when I was going to the countryside was the competition over water, over land between the urbanizing sprawl and the farming communities. And oftentimes it's more expedient if you can sell your land and get cash up front than to go into the discipline of agriculture. So that's something that we're trying very hard to slow down in regard to the need for a food production initiative.

# [Inaudible Question]

### LUIS P. LORENZO

Right. The question was the role of the private sector in the hybrid rice technology commercialization. There are two activities here. There is the activity of producing seeds. Farmers here take for granted that you buy your seed and you plant it. In many countries, after you plant your seed, you try to retrieve from your crop from what you think are your largest ears of corn or your best rice stalks, the better seed and replant it. It doesn't work for hybrid, as we all know. So there is the business of producing seed, so the private sector has found it financial viable to go into that business.

Then there is the business of small groups of farmers that go into their own let's say integrated system of a rice farm with the mechanized approach of farming through harvesting and then the rice mill that goes with it, plus the marketing. And I've tried to teach – and it's helped – states, towns, localities to brand their product and then get them shelf space in supermarkets and grocery stores or to market directly to large-employing industrial countries, so that we are able to cut the transport and the intermediary costs.

# **QUESTION**

Thank you, Your Excellency. Good morning. I work in West Africa for the agriculture project that Dr. Norman Borlaug founded. I work on rice, but this morning I'm very happy to have a soybean breakfast.. We are using the soybeans for soil nutrition, to feed the soil, as a rotation with rice, with NERICA, but at the same time to improve the nutritional quality of

particularly baby foods in Guinea, so I'm very happy to hear the pairing or merging of rice and soybeans. Thank you.

# [Inaudible Question]

### LUIS P. LORENZO

Well, we realize that this is a temporary. We make sure that the private sector passes on the subsidy to the farmer that buys the seed. We realize this is going to be temporary, and when a farmer pays – let me see, I'm trying to compute – about \$30 U.S. dollars for a bag of seed. But at the end of the 110-day crop or 100-day crop, he's able to net \$1,550 minimum, then I think he can understand the economics. Because most marginal farmers, unfortunately, from the outset have this very negative impression and look at cost rather than the cashflow and income that you get in the end, especially if there is no assurance of a market that they can sell their product. So we're trying to change that mindset. And what's good is that the hybrid rice varieties we are getting approach the pallet or the diet of the Filipinos like. We like the geoponic type of rice, a bit sticky, long grain, and that we consider fancy rice, so it's very marketable, and in fact some of the producers are beginning to export and get a better price on the export market.

# [Inaudible Question]

## LUIS P. LORENZO

The role of rural electrification in the Philippines. Maybe, let me preface the answer by saying, many of the problems that we are going through in the world in regard to terrorism – insurgency, pockets of guerilla activities – is really a function of a few misguided people but finding a nest in people who sympathize and are willing to hide them because they don't see an opportunity for them. I've always said over the last four years at various international forum with WTO, that the people who need it most, the people who need to be helped, must be given hope and must be able to actualize that hope.

And hope must come in various forms, whatever development means: Sufficient, clean, running water, a decent home, simple home, electricity, electric power, the ability to have a sustainable livelihood where there is self-worth and self-confidence, and the opportunity to know that through my hard work I am able to bring my children through an education program if the state can't provide it, that will allow the family to improve into the next generation.

These simple needs translated across all cultures, religions, gender, are all the same. And if that can be addressed, as was pointed out yesterday by Dr. Borlaug in regard to initiatives, in our case, food – food both to feed people and minimize hunger – but to provide a lasting economic activity alongside rural electrification or whatever, then there is hope, there is real hope. And that's what I believe in and what many people believe in, in this room.

The important thing in the Philippines is we have 38,000 we call barangis, or small villages, of which about 23,000 are electrified today. So we still have a backlog of about 15,000 that we hope within the next six years we will be able to complete. It's very difficult when you have island pockets, because you've got to either put submarine cables or set up your own diesel

plant to provide and bring fuel across. Or we use wind, or we use solar now, and we're trying all kinds of new technologies, including burning some of the, let's say the waste, let's say rice hull or corncobs or whatever you have. But what's important is that it is being addressed, and it is being addressed in partnership with an American firm that's still solvent in the Philippines, called Mirand, who I understand had filed for Chapter 11 here but still is very active overseas. Okay, so I hope that answers your question. Thank you.