

**2006 Norman E. Borlaug/World Food Prize International Symposium**  
*The Green Revolution Redux:*  
*Can We Replicate the Single Greatest Period of Food Production in All Human History?*  
October 19-20, 2006 - Des Moines, Iowa

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| <p><b>SESSION TWO: Agriculture and International Development</b><br/>October 19, 2006 - 10:30 a.m. – 12:15 p.m.<br/>Hon. Mike Johanns – Secretary, USDA</p> |
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*Introduction*

**Ambassador Kenneth Quinn**

President - World Food Prize Foundation

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At this time, we will have the first-ever Secretary's lecture. When I wrote to Secretary Johanns, I think he might have been surprised when I said, "We'd like you to deliver the Secretary's lecture," since being the Secretary of Agriculture, wherever he goes that the Secretary's address is what he would give. But we see the Secretary's Address as being a special part of our program, not just this year but every year. And it's one that was inspired by the fact that Iowa is the home to a number of illustrious U.S. Secretaries of Agriculture – from "Tama Jim" Wilson, to Henry C. Wallace, E. T. Meredith, Henry A. Wallace – these were leaders in America and shaping American foreign policy.

And there's nobody who is more perfect to give this first address than Secretary Mike Johanns, because he now joins that illustrious list of distinguished Americans and distinguished agricultural experts. Born in Osage, Iowa, in Mitchell County, not too far from Cresco where Dr. Borlaug grew up. In fact, Dr. Borlaug told me he used to play football and even come over to wrestle before, you know, when Cresco was a wrestling power and Osage hadn't started it. And now it's all been reversed, and Osage is the wrestling power.

But Secretary Johanns, somebody who grew up on a farm, had an intense passion for agriculture from that experience and has never forgotten where he grew up or where he's from. Like Dr. Borlaug, educated in Minnesota and then in Nebraska. And he went on to become the 38<sup>th</sup> governor of the state of Nebraska, and from there the Secretary of Agriculture.

Mr. Secretary, we're so pleased to have you here because your priorities have been the priorities of the World Food Prize and our symposium. We call this kind of our conversation, and we have people here from over 66 countries as part of that conversation. And I know when you were addressing the new farm bill, you went out and had conversations all across our country. And your priority is fighting obesity, and last year we had experts on malnutrition/obesity together, probably for the first time ever. And you have a new interactive, bilingual MyPyramid to focus on that issue. And your focus has been on biofuels, and we're going to have that in our agenda next year. And so it's a great privilege for me to welcome you back home to Iowa and to the World Food Prize. Secretary Mike Johanns.

*The Secretary's Address:  
Advancing American and Global Agriculture*

**Hon. Mike Johanns**

Secretary, U.S. Department of Agriculture

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Well, thank you very much. That was a very nice introduction, very generous introduction and a very nice welcome. Now, ladies and gentlemen, I was looking out at the crowd, as the introduction indicated that I grew up near here, near a community called Osage, Iowa. And I must admit I did see a little bit of confusion on some faces out there. Not everybody, Dr. Borlaug, knows where Osage is at. Now, we do because Cresco and Osage are pretty close together. So I better explain to you where Osage is at before I start my comments here today. Ladies and gentlemen, Osage would be just south of Stacyville and St. Ansgar and it's straight east of Manley. So now you know where Osage is at.

I do appreciate the kind introduction. It's such an honor to be here today, presenting the first Secretary's address at the 20<sup>th</sup> Annual International Symposium for the World Food Prize. In the 20 years since Dr. Norman E. Borlaug conceived of the World Food Prize, it has been recognizing the most significant achievements in so many areas – food quality, quantity, availability. Now, USDA is honored that four of our own have been awarded the World Food Prize in years past. In fact, Dr. Borlaug himself began his career with the United States Forest Service some years ago, so we at the USDA have a long, long, very positive association with him.

I understand that your 20<sup>th</sup> anniversary is also marked by renaming this symposium for Dr. Borlaug. Ladies and gentlemen, such a fitting tribute for the man who so dramatically reduced hunger through his pioneering work in reproduction. Dr. Borlaug, it's always a pleasure to be here with you. It's a pleasure to be here with you today.

I also want to recognize Josette Sheeran from the State Department. I haven't seen Josette yet, but I've been made aware that she's here; and Ambassador Quinn whom you all know.

I'd like also to offer my congratulations to this year's laureates – Alysson Paolineli and Edson Lobato, and Colin McClung. Their work to improve agricultural conditions in regions of Brazil has improved the lives and livelihoods of countless people. Like past winners, they serve as an inspiration for all of us to ensure a safe and a plentiful food supply for all people all across this globe.

Agriculture is one of the essentials of life. It's the foundation of society. It's the foundation of civilization. Without an adequate food supply, people have no opportunity to strive beyond anything, beyond mere survival. In the 21<sup>st</sup> century we certainly must inspire to more. At this symposium, you've been asked how we can replicate the success of the Green Revolution. I believe that there are tremendous opportunities for new advancements on a number of fronts.

We are seeing such amazing successes in the areas of productivity. Research leads us to new technologies that were beyond the imagination when I was that young boy growing up on

that farm near Osage. We are finding creative ways to deliver agricultural expertise to critical areas of the world through our extension service. And we are pressing for new world trade policies that we believe have the opportunity to lift millions out of poverty. This is a dynamic time in agriculture, maybe the most dynamic time certainly in my life. I would make the case – it could be as revolutionary as the agriculture of past decades if we seize the opportunities that are before us.

That means continuing the great success story of agricultural productivity. In the United States alone productivity just continues to grow year after year by nearly 2% each year. Now, putting that into perspective, over the span of about 50 years we've tripled the amount of milk produced by an average cow and quadrupled the amount of corn harvested from a single acre. Like I said, these would have been numbers I could not have imagined, growing up on that dairy farm.

Now, the world benefits from these advances. So how do we sustain them? For starters we recognize that important role of ground-breaking research like that of Dr. Borlaug and so many other scientists that have worked with him. We must recognize that the breakthroughs of tomorrow might today be nothing more than experiments that involve and invoke a lot of skepticism. These experiments require willingness to invest with really no guarantee that the return will exceed that investment.

For private companies, the risk might be too great, regardless of the potential social benefit. That's why I believe so much in public research and the vital role that it has to play and why it is so enormously for government and government-funded researchers to stay closely connected to our private sector. You see, public research lays the foundation. We do some problem-solving and then often pass the torch to the private sector to take it to the finish line in the form of the commercialization of that product. Only then do we realize the broad social benefits.

Our researchers have developed strong public/private partnerships, but we want to press to make them even stronger. The more closely we are linked, the more likely it is that our research dollars will ensure that the amazing story of agriculture continues, not just today but on into the future.

The advancements just in the past few years are convincing evidence of the value of our investment of tax dollars in this arena. USDA scientists identified a major wheat gene for aluminum tolerance. Wheat strains can now be bred that will flourish in acidic, high-aluminum soil. Productive wheat harvests in areas with this soil type will be crucial as the world's population continues to grow.

We collaborated with the International Rice Research Institute in the Philippines to develop a high-yielding, disease-resistant rice. It was higher in levels of zinc and iron than traditional varieties. Successes like these go beyond increasing productivity to increasing the nutrition of the crops that we produce.

One of the most troubling problems in developing countries is malnutrition. Populations that rely exclusively on a very few staple crops are often lacking in necessary vitamins and

minerals. Iron deficiency is the most serious nutritional deficiency on a worldwide basis. It is estimated to plague 30% of the world's population. In Africa alone nearly half of all pregnant women and more than half of all school-age children suffer from iron deficiency. It's sad. It impairs learning ability, it reduces cognitive function, and it can even be deadly.

We have made some exciting discoveries that will help to increase iron consumption. We have developed a strain of rice that allows the human body to absorb more iron. We have developed a breed of corn that has been shown to increase iron absorption by up to 50%. Vitamin A deficiency is second to iron in its impact in developing countries. A lack of vitamin A can lead to a weakened immune system, impaired vision, and cause blindness.

Now, our researchers have tackled this problem, too. Our researchers have bred darker carrots that have a higher beta-carotene content, which is an important source of vitamin A. Making these carrots more readily available can help to reduce the number of people who suffer from blindness and from weak immune systems. In some cases research is only in the very first steps. What we learn in the lab we must teach our farmers to apply in the field, and that's where our extension efforts have always come in and will come in in the future.

At USDA we direct our domestic extension efforts to our land-grant colleges and universities. Every state has a university that is tasked not only with research and education but also with that outreach into surrounding communities. A researcher at North Carolina A&T University explained this mission very recently. The researcher said, and I'm quoting, "Our job as scientists is to give back to the community and then play a role in making the lives of our citizens better."

We're doing this on an international level as well. Yesterday morning this symposium opened with a special session sponsored by USDA on the joint U.S.-India Agricultural Knowledge Initiative. President Bush and India's prime minister directed USDA and the Indian Council of Agricultural Research to lead this effort. Through it we provide support to many agricultural universities in India. The United States has pledged \$24 million to support this venture. The purpose of the initiative is broad, and it includes promoting food security, increasing technology transfer, supporting India's integration into the global economy and reinvigorating U.S. and Indian university partnerships.

Iraq is another country with the potential for great agricultural advancements, and we are committed to help, do all we can, so Iraq can realize its potential. Iraqi agriculture, once the lifeblood of the country's economy, was choked about by years of neglect. Agriculture is the second-largest contributor to the Iraqi economy, only behind oil, so revitalization is crucial to ensure both a plentiful food supply and a stable economy.

This summer I visited Iraq and signed an agreement to pursue a program called the Iraq Agriculture Extension Revitalization Program. Through this program, our land grant universities will train Iraqis to become extension agents. These agents will in turn provide the technical assistance that is so necessary by Iraqi farmers. The goal is to breathe new life into Iraq's fertile fields, and we believe we can do it.

We have also set our sights on Africa, with a multifaceted effort underway to help the continent overcome agricultural challenges and to feed its population. Last year I was in Africa twice. From training African scientists to hosting biotechnology workshops there, we're committed to this cause. We are helping African policymakers to understand the enormous potential of biotech crops that can literally make a life-saving difference. And we are transferring new technologies to Africa by training their top scientists.

The Board for International Food and Agricultural Development, which is meeting in conjunction with this year's symposium, will discuss the potential for a Green Revolution in Africa. The Board assists the U.S. Agency for International Development in fully engaging land grant universities in foreign assistance efforts. The academic community has stepped up to provide international assistance in really magnificent ways. And yet I hope my friends in academia accept the challenge to go even further, to seek innovative approaches to reducing hunger in Africa, on that continent, but beyond.

Whether a scientist, a professor or agribusiness owner, we all have an inspirational example to follow in Dr. Borlaug. Now, I hope I don't embarrass the doctor, but I cannot help but highlight the ingenuity and leadership you continue to demonstrate in the fight against hunger. The global rust initiative led by Dr. Borlaug exemplifies the power of working together, of collaboration. USDA is just one of many partners in this effort to combat a stem rust that has emerged in Africa. We're helping to screen American wheat and barley varieties and advanced breeding lines in Kenya to identify lines that are resistant.

Your commitment and ideals, Dr. Borlaug have inspired collaboration of another kind – through USDA's Norman E. Borlaug International Science and Technology Fellows Program. This fellowship program helps to strengthen agricultural practices in other countries through the transfer of new science and new technologies. Borlaug fellows are top agricultural scientists and policymakers from developing countries. They are assigned a mentor who coordinates up to six weeks of scientific training for them.

This year we will spend \$1 million dollars to train about 100 fellows from 20 countries around the world. As you know, we have 57 fellows present at this symposium, representing 13 countries. I'm so glad they're here. Research, education and international partnership all come together in this program, and I'm confident that these fellows will help carry on the fight against hunger with great passion. And if our program doesn't inspire our fellows to do so, I'm assured that you can have it covered, Dr. Borlaug. I have heard that your talk has been inspirational here.

There exists another, ladies and gentlemen, that I would be very remiss if I did not mention – an opportunity to make a real difference in this world. But I must admit I am concerned that this opportunity is slipping away from us, maybe not to come back in this generation. Now, this opportunity, it's not related to new technologies. It's not even necessarily related to more education. But I believe it has the potential to lift millions out of poverty.

I'm speaking of the international trade and specifically the Doha Development Agenda. It is another piece of the puzzle when it comes to addressing world hunger. See, I've long believed that trade is an engine of economic growth that increases rural income and offers poor countries access to markets, to new technologies, to partnerships and opportunities for employment and

investment. I believe we have before us literally a once-in-a-generation opportunity to have a profound impact on hunger and on poverty in developing countries.

Two thirds of the WTO member countries are developing countries. Thirty-two of these are considered least-developed countries, truly the poorest of the poor in the world. In these countries, over 70% of the poor live in rural areas where agriculture is the employer. Now, according to a World Bank study, roughly half of the global economic benefit from free trade would be enjoyed by these developing countries. In particular, more than 90% of these gains would come from reducing import tariffs. A study by the International Institute of Economics estimates that global free trade could lift as many as 500 million people out of poverty and inject \$200 billion annually into the economies of developing countries. It far surpasses anything being done in aid.

Economic growth spurred by trade liberalization has tremendous potential for development, far more than voluntary aid donations alone. That's why we've worked so hard. Along with U.S. Trade Representative Rob Portman and Ambassador Susan Schwab, I have worked to reach a successful resolution to the WTO negotiations. The talks have stalled, and in fact they were suspended in July, and I'm disappointed by that. There is so much at stake here. It's not an exaggeration to say that lives are depending upon our success. I think a quote from a former president in a least-developed country says it best. He says, "The wrong policy on agriculture might lose elections in France, but it loses lives in Africa."

The United States remains committed to the Doha Round as a means of reducing poverty in developing countries. It is my sincere hope that our ambitious offer, tabled about a year ago, will be matched, unlocking the true potential of the Doha Round.

Ladies and gentlemen, some concluding thoughts. We all have a responsibility to humankind. No one should have to live in hunger, wondering where their next meal may come from. The World Food Prize provides an excellent forum to raise awareness and to remind each of us that we have a responsibility to give to this cause – whether that be through science, technology, policy, education, or time.

USDA is proud to provide financial assistance to the World Food Prize because, Dr. Borlaug, we believe in your cause, we admire your passion, and we are determined to carry on your vision.

Thank you all. God bless each of you.

**Ambassador Kenneth Quinn**  
President - World Food Prize Foundation

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Mr. Secretary, thank you for your marvelous review of all the issues, and particularly for your inspiring words at the end. They mean a great deal to all of us.

I want to tell the press that the Secretary will have a press availability right after this, up in the Waterloo room upstairs. And, Mr. Secretary, you're often far away from Iowa, and so we have some gifts that we want to leave and send with you... We have a bottle of Iowa wine, special 20<sup>th</sup> anniversary. And for the flight back, a copy of Dr. Borlaug's biography, and one other book about our 20 years with pictures of all of our laureates. I don't want to weigh you down. I'm happy to give these to your staff, so they'll have them in the car for you...

[Johanns: I've got to get the book signed...]

This is called value-added, because when Dr. Borlaug signs the book, the value goes way up.