

**WORLD FOOD PRIZE SYMPOSIUM
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Thank you very much. As like everyone else has said as they come to the microphone, it's a great honor and privilege to be here. In my particular case there are two or three times each year where I really do learn a great deal about what the Agricultural Research Service can do to have a profound impact on the big picture items, and this is one of those. The others relate to when I get a telephone call from Dr. Borlaug and he tells me in no uncertain terms what we could do to help with the big picture. And I'm proud to say that in almost all cases we've been able to respond positively to his directives. And it is an extraordinary pleasure to participate in those dialogs and to work with him in that way.

What he usually says is, "Protect or enhance germ plasm, work with the international centers, look for niche or novel crops that people in places where there is poverty can use them, don't get too fancy, put the science into the seed so that it's relatively user-friendly before they get it, and be humble, because technology transfer is at least as important as research is." I think all of that constitutes good advice.

This session this afternoon – and I've been asked to make some general comments as a preliminary with regard to the Department of Agriculture's activities and positions – is very timely, as timely as most of the others have been today. And, of course, we are going to talk about foot and mouth disease and Mad Cow disease.

We're going to talk about a very interesting topic that may not have been timely or seemed timely at the time it was envisioned, but it certainly is now: How real a concern is agroterrorism and bioterrorism? And by the way, I would refer you to someone who plagiarized that very question for *Time* Magazine on the 8th of October. And lo and behold, in their assessment of what's real and what's terrifying about the terrorist threat, they also have in here foot and mouth disease as an issue. So they picked up on that. And I think the question has changed from September 11th to a statement, I'm sorry to say.

And then we're going to talk about food safety and microbial contamination. Although I said something this morning, I cannot pass up the opportunity to say once again, I hope you paid strict attention to what Peter Chalk said and what he writes, by the way. He writes well, and he writes on similar subjects, and he is very, very good at stating what he knows. And he is awfully close to the mark.

On behalf of the Secretary, Secretary Ann Veneman, and the Department of Agriculture and the Agricultural Research Service, it is a pleasure to say that I would not pass up the opportunity to be here with you for anything, and talk about globalized trade and the threat of pandemics, particularly with a group like we have gathered here today – true experts, many of which have firsthand operating experience to back up what they are going to say.

This session's topics and the symposium title, "Risks to the World Food Supply in the 21st Century," are timely, and they address some extremely important issues that concern the entire global community. If these risks are, in fact, realized, they will, they will, most definitely affect our capacity to meet any goals set to diminish world hunger.

Today the world's food and agricultural systems are virtually all interconnected, rich and poor, I might add; and increasingly sometimes, unfortunately, for those without any money, they are consumer-driven. It is a worldwide system that is directed and influenced by the forces of the global economy and advances in information technology and biotechnology that are changing the way that we farm and store or disseminate food and the way we do business.

In the global marketplace, national boundaries no longer constrain agribusinesses or farmers or producers, and businesses face more competition to provide consumers with a high-quality product, one which they demand at a relatively high price. It stands to reason, then, that trade and export markets will become increasingly more important to the future of our farmers in the developed world and to the food industry. However, in another less fortunate market network, there is and must be another force, one which will get a safe, wholesome and adequate food supply, regardless of value added, to those who really need it.

New technologies have facilitated the rapid growth of global markets. In the past, agricultural technology focused on tools and techniques to lower farm costs and increase yields. Today biotechnology and information technology are expanding markets for farmers and providing better communications between producers and consumers, further increasing market opportunities, virtually everywhere. In this context, it is multinational corporations, nongovernmental organizations, donor states, and global relief organizations that can make a lasting difference. The emergence of agricultural biotechnology and its rapid and widespread adoption in the United States, for instance, poses a significant, new challenge throughout our food system and this global trading complex.

As many of you have heard many times, agricultural biotechnology holds tremendous promise. Without it, the goals of the Food Summit or other meetings and sessions like it will not be met. And, yes, we still believe, particularly with regard to the so-called Third World countries, that it is a crime against humanity to withhold cutting-edge science from the food-insecure nations of the world. However, world reaction to such incidence as that involving Starlink corn, for instance, clearly illustrates the importance of continuing a coordinated and rigorous, science-based approach to this emerging technology, particularly with regard to risk assessment. And I think anyone with any sense about the future of biotechnology would agree that we need a risk assessment program added to our research activities that will allay fears about transgenic products and will, in fact, more closely balance with the biotechnology research that we know of today.

Despite some resistance, production and trade of agricultural biotechnology products have increased dramatically in recent years, even in spite of all the problems that we have seen in Europe and other similar-thinking nations. We have reduced costs, increased yields, and enhanced beneficial characteristics of food and fiber products. This trend is going to continue as

more biotechnology products with more beneficial characteristics are commercialized. And there is clearly an industry focus on looking for those kinds of products to roll out now.

Countries which, through choice or necessity, participate in this biotechnology event will validate the value of biotechnological products, but those that do not, and there are several now who have opted out, will themselves be required to do some developing in the future as they try to recover lost markets. That's my opinion.

It is imperative that issues concerning food safety and environmental impact are addressed by sound science so that consumers everywhere can reap the benefits of biotechnology without fear. There is no place for fad nor fancy in this debate. As long as there are so many malnourished and in need of food, we need good science, and we need policy based on good science.

Technology also hold great promises for solving some vexing environmental problems and for helping to ensure the safety of our food supply. For example, reduced input of chemicals, often a product of biotechnology, can provide both greater production efficiency and eliminate risks to the environment. A growing number of farms in industrialized countries already use sensors and automated responses to monitor variables, robotic machinery and other high-tech means to optimize both production efficiency and environmental quality. But there is a wealth of experience, some bad, in technology to promote environmentally benign production practices in the developing world, too. Again, putting into the science into the seed before it arrives in the developing country can do much to enhance and create wealth.

Biologically based technologies are particularly promising as the source of new products for farmers. Moreover, agricultural byproducts can already be the source of clean-burning fuels and industrial ethanol, even with the simplest of technologies. Agriculture also produces a variety of special chemicals derived from plants, soy-based inks and diesel fuel, industrial additives, biopolymers (?) and films. With modest investment, these can be new sources of wealth in the developing world, and they can employ many.

While the globalized economy has many advantages, the free flow of agricultural goods, coupled with an increasingly mobile population, has virtually ensured that outbreaks of disease are no longer regional issues but they are global ones. During the recent past, we have witnessed several catastrophic disease epidemics that have stretched the resources of governments, threatened economies, posed serious scientific problems of worldwide proportions, and in some cases brought down governments.

The foot and mouth disease outbreak in the United Kingdom, mentioned several times today, and in Europe and its potential spread represents a major threat to the livestock and grain industries of many countries. In response to the United Kingdom's FMD outbreak, the USDA immediately stepped up its border control and reviewed and strengthened its protections of this country; and we still are in that mode. We also sent dozens of veterinarians to Europe to help contain the disease. The spread of bovine spongiform encephalopathy, BSE, or Mad Cow disease in Europe and its recent discovery in Japan has enormous implications for the beef and feed markets worldwide. Indeed, the discovery of just a few cases of Mad Cow disease in the U.S.

could easily have the same impact because of the fears that it might cause that an outbreak of foot and mouth disease would.

Policies to regulate feeding practices and actively test for BSE can help protect consumers, farmers and ranchers, therefore. And as with foot and mouth disease, strict controls, rapid diagnostics and a continuous collaborative research will be vital to our efforts in eliminating this scourge too.

Worldwide agricultural disease problems also include many other livestock diseases, some zoonotic which are endemic to the Third World and have had devastating impacts on an already poor and undernourished population. Continued research which optimizes advances in technology can help solve not only these disease problems but also many other food security problems in the developing nations of the world.

The assistance and collaboration of scientists from the industrialized nations of the world, working with these poor nations, will be essential to establishing a sustainable agricultural system in the developing world. And to a degree, the assistance of our well-developed science infrastructures to less fortunate countries is self-serving; for if they do not have these problems, we are less likely to acquire these problems.

Global disease concerns also involve microbial foodborne contaminants that can transverse borders and spread their deadly effects further into the new global economy. Diligent testing and consistent standards grounded in sound scientific principles can help ensure food safety for trading partners and consumers worldwide.

Plant diseases and insect pests also pose a significant problem to global agricultural trade. Knowledge and management of diseases and pests, of quarantine significance are vital not only for protecting domestic crops from foreign disease but also for maintaining and expanding export markets for plants and plant products. But the best protection comes through host resistance. Long-term research, yes, but more or less a permanent advance when it is achieved, it requires little in terms of production sophistication after it is achieved.

Continued research, constant vigilance at a much higher level than we have seen in the past, and rapid detection of disease problems will be the keys to controlling all these diseases and protecting the world's food supply system.

In today's global environment all of these problems require a coordinated and concerted effort on the part of governments, regulatory officials and scientists worldwide, not to mention farmers.

USDA and the Agricultural Research Service, the Animal and Plant Health Inspection Service, the Food Safety Inspection Service, and others stand ready to participate in helping to solve agricultural problems that place our world food supply at risk. Of course, we're just a small part. Industry has to play a role, first responders must play a role, state and local governments, trade officials, those who set trade policy – everyone must work together without worrying too much about who gets the credit.

Unfortunately, today issues concerning risks to the world food supply transcend those posed by naturally occurring pests and disease. The events of September 11th have shown that terrorists will not hesitate to use any means to inflict mass death and destruction on their perceived enemies. The same would be true of the economies of the free world. The record shows the terrorist attacks have been steadily increasing with lethality, with each subsequent attack becoming more brazen and “spectacular.” It is chilling to imagine the evil that could outdo the occurrences of September 11th. The thought of a biological weapon in the hands of a terrorist helps paint a clearer picture of that kind of evil.

As has been very elegantly indicated earlier today, no sector of society and no nation is immune from this brand of terror attack. And our global agricultural and food supply system cannot be overlooked when assessing our vulnerabilities to this threat. Unfortunately, we must now be prepared for the previously unthinkable.

We know of no specific threats against agriculture at the moment. Our food supply continues to be the safest in the world at a reasonable price. And of course we intend to keep it that way, but we must increase our vigilance in order to do so. We must set aside organizational barriers that have existed in the past. We must work together to accumulate just the right resources, just the right partnerships, just the right friendships, just the right information technologies, and just the right working relationships.

Thank you very much. That is my introductory comment, and now I’d like to move on to introduce our first speaker.