

ELSA A. MURANO

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Well, good morning. If this were Texas, I would say, "Howdy," but I won't do that to you. Well, it certainly is a great honor for me to be here. Thank you, Senator Grassley, for that nice introduction.

It's also great to be back in Iowa. As he said very correctly, I am a former Iowan. I spent five years doing research just north of here as a faculty member at Iowa State University. Those were very fun years and very exciting years and very rewarding years for me. For the people in Iowa – and I don't have to tell you this – have great character, and there is a real sense of community here in this state.

But I will tell you that when I first moved to Iowa someone told me a joke about Iowa that maybe it's okay if I tell it to you this morning. So don't take it personally, those of you who are from Iowa. And it's a short joke. It basically says that in Iowa all the towns are named after the water tower. So it feels good for me to be back home, so close to the Ames water tower, so let me just say that.

Well, the work the World Food Prize Foundation carries out to improve the quality, the quantity and the availability of food in the world is extremely important. It's not only highly commendable work, but very impressive. Although I just met Dr. Pedro Sanchez last night – he's this year's laureate, as you know, we do have a few things in common. First, we are both Cuban by birth and immigrated to the United States more than forty years ago. Of course, I was a baby then. I don't know about you, Dr. Sanchez. Second, both of our families own farms back in Cuba, so we have a great love for agriculture, and in fact I would say that it's in our blood. And third, we both have dedicated our professional lives to the study of food.

Well, I'm very proud, indeed – I can't tell you how proud I am really, that a fellow Cuban-American is receiving such a distinguished award. Dr. Sanchez is one fantastic example of how diversity has made the United States the great country that it is. Coincidentally, the U.S. Department of Agriculture, where I work these days, just celebrated Hispanic Heritage Month. And I was asked to speak at various events during that time, and usually I would begin my remarks by listing famous Hispanic Americans who have made significant contributions to society. So now I can very proudly add Dr. Sanchez to that list.

As you all know, the important of a plentiful, nutritious and safe food and water supply to the health of citizens around the world cannot be overstated. We have many examples, unfortunately, of the effects of world hunger, malnutrition and foodborne disease throughout

history. It is a fact that no society has ever flourished without these basic needs being met. It is also true that the abundance, wholesomeness, and safety of food and water are all characteristics that must be present simultaneously, for all three are equally important.

I think we can all agree that a plentiful food and water supply is of little value if it is unsafe or does not positively contribute to human health. As Under Secretary for Food Safety at USDA, my primary concern is just that – food safety. So I would ask your indulgence this morning as I discuss this issue with you.

And, incidentally, when we speak about food safety, please know that water is an integral part of this issue, for the quality of water that is used in food production, processing and preparation has a direct impact on its safety. So let me explore with you some factors that affect the safety of food and water and thus impact human health and well being throughout the world.

First is the notion that food trade has a tremendous impact on the health of populations. In the old days foods were traded locally, and so if these foods were contaminated; foodborne illness that developed remained a local problem as well. Now the world is truly shrinking. Increasing international trade has meant that a greater variety of foods are available to the world population. This expanded reach in food distribution, which has resulted in improved nutrition, has also meant that a greater probability exists for unsafe food to reach a large population.

So to deal with this problem, surveillance systems have been developed in industrialized nations like the United States. These methods are used to quickly detect the presence of hazardous agents in foods at various segments of the food production continuum. With quick detection, the probability that adulterated foods can be removed from the marketplace increases. Quick detection now means not only finding a particular organism but knowing that you have identified the exact strain so it can be traced back to its source.

Well, these advances have been very useful in combating foodborne illness and indeed are crucial to any food safety program. However, this requires advanced analytical technologies. How can developing nations hope to ensure they abide by global sanitary requirements and thus increase their trade capabilities if such technologies are financially and technically beyond their reach?

In addition to detection methodologies, there is the issue of food processing and how new technologies can help decontaminate foods without affecting their quality or nutritional value. These technologies, although available in developed countries, are usually unattainable by most of the world.

Secondly, the emergence of new foodborne hazardous agents is an example of another food safety challenge. If all agents remain the same, life for people like me would be very, very easy. But instead, we constantly aim our resources at what is really a moving target, for we know that for a variety of reasons, most of the reasons being biological in nature, new hazards do develop, new strains of bacteria, for example, emerge and are a cause for concern because of the effect

they can have in terms of increasing their capabilities of causing disease, in other words, their virulence, or because they are resistant to methods designed to control them.

A good example is the organism e-coli 015787, an organism that came to the forefront during the last 20 years and has been shown to be able to develop resistance, under certain circumstances, to acid conditions used to process certain foods.

Another example is antibiotic-resistant strains of salmonella, which have been increasing in prevalence over the last few years.

So we must be vigilant regarding these emerging hazards and ensure that we have the science to keep pace with them. The one question we may ask ourselves is: How do we prevent these problems on a global scale, knowing the vast differences that can exist in the way that foods are processed and how antibiotics are used and regulated from country to country?

A third challenge is the growing number of immune-compromised individuals in the world, individuals with HIV infection, individuals with organ transplants or receiving chemotherapy – all are more susceptible to foodborne illness. Not to mention the fact that in some countries, notably actually the developed ones, we are seeing an increase in the elderly population, who are also more prone to succumbing to infectious diseases.

Consuming a pathogen that would cause little damage to you or me could wreak havoc in an individual with a suppressed immune system. Even pregnant women are more at risk of food-related infection, particularly from diseases such as listeriosis, which can cause stillbirths.

So can we design food systems that will effectively protect these individuals without limiting their access to nutrients obtainable only through a varied diet? Or without causing an increase of price of that food beyond what they can afford?

Another challenge is a trend towards foods that are all-natural. Well, these new foods are not necessarily unsafe; however, we must remember that bacteria and parasites are also all-natural. So foods that have fewer or no preservatives can pose a challenge to consumers if they don't know what "all-natural" implies and how these foods should be handled and prepared.

So now that we have talked about some of the challenges, let's explore some solutions.

First, we need to make food safety a worldwide endeavor. Just as Dr. Sanchez's work throughout the developing world to reduce hunger and malnutrition, we must work worldwide to reduce foodborne illness.

One mechanism already in place is the CODEX Commission, an international organization that sets standards in food hygiene, food labeling, and other areas that can be adapted by individual countries. The advantage of such a standard-setting approach is that it helps raise the bar for food safety. It is important to note that the burden to developing countries needs to be considered, and the realistic standards and methods to achieve them should be part of the

discussion. These countries need help in attaining the standards, and it is through strong relationships that this can be accomplished.

A second solution to these food safety challenges is to ensure that food safety decisions are based on science. This may sound obvious to those of you who are not in the food safety business or who are not in Washington, DC, but there is a great temptation to let politics influence the decision-making process. Trust me, I've been in Washington for a year – I know. Nothing else needs to be added, I don't think. But we must work towards increasing the science that is available, by fostering food safety research in the areas of greatest need. And, importantly, sharing research results internationally, because that helps make better use of scarce research dollars or yen or pesos.

A third solution to these food safety challenges is the education of all individuals who are involved in producing, transporting and preparing food from farm to table. Education is not a substitute but a complement to strong food safety policies and programs. Phone calls to the USDA's meat and poultry hotline, for example, have shown us that consumers still need the basics on how to store and prepare food safely, even in the United States.

I recently took a number of trips outside Washington, DC, which I love doing, to spread the safe-handling message to minority populations, to the elderly, and to school children. Well, I will tell you that there is a great hunger – and pardon the pun here – but there is a great hunger out there for information. People want to know how to keep their families safe and healthy.

Well, consumers aren't the only ones who need education. We need to educate producers on management practices that can improve food safety on the farm. We need to educate the industry that is responsible for producing safe food.

I will tell you that in my immediately former life as a research professor at Texas A&M University, I participated in several projects in Latin America designed to train small farmers on good agricultural practices. One of my colleagues is here in the audience, Dr. Mike McCorder.

Well, these folks need this information, not only to enhance their competitiveness in selling their crops abroad, but for the well-being of the populations that they feed, which certainly includes their own families.

I believe that with these strategies, a worldwide focus on food safety, science-based decision-making and education along the farm-to-table chain, we can make a difference in reducing the burden of foodborne illness that affects all of our countries. This will allow us to better reach our goal of providing abundant, high-quality and safe food and water.

But how do we do it? How do we turn from being hearers of these words to being doers? Well, let me relate to you a situation that may help bring some perspective to this question.

Since last year's attacks on the World Trade Center and the Pentagon, the U.S. Department of Agriculture has dedicated significant resources to the issue of biosecurity. These are resources

that the Congress of the United States provided for us, and we're very grateful for their leadership, especially from people like Senator Grassley.

These have been not only financial resources but perhaps more importantly the human capital that is so necessary for us to be as prepared as we can be to anticipate and rapidly respond to threats to our food supply from intentional contamination. We have formed action teams engaged in mock exercises, revamped our laboratory capabilities, conducted vulnerability assessments, strengthened our partnerships with government and the states, and countless other activities which are crucial to protecting our agriculture and food supply.

So you may be wondering right now, Dr. Murano, what does all this have to do with the topic of today? Well, the way I look at it, it's because that same motivation, zeal and relentless commitment from the government, private industry and individuals that have been driving these efforts in biosecurity is what should be applied to solving the problem of world hunger that the Food Prize is all about.

Our challenge is feel that same urgency to act and to work together in a meaningful way to ensure that all citizens have access to clean and abundant food and water. I congratulate all of you for the important work that you do in reaching that goal, and I thank you for letting me speak to you this morning on a subject that is near and dear to my heart, which is food safety.

Of course, I want to again personally congratulate Dr. Sanchez on receiving this year's World Food Prize. It's an honor for me to be here. I would just like to tell Dr. Sanchez one more time, *felicitaciones, compadre*. Thank you very much.

Q&A

Kenneth Quinn (KQ)

Murano (M)

Question (Q)

KQ Secretary Murano said she would be pleased to take a couple of questions. We have some microphones here if anybody would like to come down. While we're looking or you're considering whether you have a question for her, I have one question, and that is: I notice you taught at Iowa State, so you have an Iowa State connection. You taught at Texas A&M, so you have a Texas A&M connection. She knows where it's going, she says. So when the big game is played, what colors are you wearing, I guess, is the question. But I think, you know, you have the right to remain silent, because you're our guest. Any questions? Anyone like to come up and ask a question? ...

Q Dr. Murano, you didn't exactly say yes – but you kind of did, I think, or maybe you said it and I didn't catch it – concerning food. Let me be very blunt, because I usually am – I'm a retired farmer. Organic food: Now, there's more and more movement toward it, it seems to me, and that's okay. I've eaten a little bit myself. I don't think it tastes any

better. It looks worse normally, and it costs a lot more usually. But some of my friends that are growing it, I really hate to argue with them when they're promoting that, but I guess I'm concerned about the safety of it. I happen to think that, by and large, food grown conventionally or even with biotechnology is better, safer than organic. And yet there's this movement, at least in our country, toward it. What are your concerns? First of all, you may or may not agree. I think... Well, I'll let you answer. What are your concerns regarding organic or nonconventionally grown food?

M That's a great question, a controversial question, so thank you for asking. As a microbiologist, I know that preservatives are used in foods for a reason. There's a lot of food additives, but within the category of food additives, as you know, there are preservatives, and they are used for that very reason, to preserve food against the growth of micro-organisms that may be found in that food. There's a trend, as I mentioned in my speech, towards foods that are not containing these preservatives, that are grown in such a manner as to be designated "organic." And it's something that, even though perhaps there's not the evidence to show that one is safer than the other, certainly as I mentioned in my speech, when you don't have those preservatives, you have to be aware of the fact that that's going to cost you something.

And that's what I think is the challenge of the food industry, especially those folks who produce organic foods and all-natural foods and so forth, is to make sure that they produce them and process them in such a way that it will not reduce the safety of those products. So I'm very eager to see what researchers who are studying this issue are able to show us with their data. I'm one that tries not to allow my opinion to enter into what I say, even though that's very difficult to do. So we'll see what the science says about it.

But certainly there is no denying it, that these foods cost more to be produced, because you cannot use the same processing and production methods that you can with traditional foods. And that consumers need to realize, more importantly than anything, is that these foods are not any safer. They might choose to have those foods at their table because of their own opinions and so forth, but scientifically speaking, they're not any safer. So it's up to the consumer to choose what they'd like to do. It's one of those issues that only time will tell how the marketplace goes, if this is just a trend that people will realize at some point that maybe the high price that they have to pay for organic foods is not worth it. So it's up to the consuming public to decide that, so I think I'll just leave it at that before I get myself in trouble. Thank you.

Q Thank you. One of the solutions you mentioned in describing food safety, relating to sharing of the research results internationally. I'd like to hear from you, what kind of steps is the Department taking to promote such things? Because I do believe food safety is a very important issue confronting many of the developing countries and definitely the USDA. The U.S. Department of Agriculture would be a great step in that direction. Thank you.

M Sure. Well, the Foreign Agricultural Service – which is the agency within USDA which is our arms and legs, if you will, to other countries – they not only engage in trade issues, which of course is important, but also in these matters that you’re exactly talking about. I can speak from my experience as a researcher back at Texas A&M University, the experiences that I alluded to in my speech. We were working on a project that was funded by USDA to impart knowledge regarding food safety and management practices in Nicaragua and Honduras.

So it’s something that I know the USDA has had as one of its missions, and certainly now I can tell you that from my own perspective, having traveled to countries in Latin America and some in the Middle East, it’s something that I certainly see as very, very important. I work very closely with my counterpart, Under Secretary J.B. Penn, who’s the Under Secretary in charge of that mission area, and we provide him with as much of the technical expertise that we can, so that in everything, every activity that is carried out, food safety stays uppermost in their minds as part of whatever project that is being carried out.

But there are certainly challenges. As you know, this costs money, and it’s the kind of activity that we depend, again, on Congress to fund for us to do. And I do believe that certainly this president, President Bush, is very committed to international relations and what he can do, especially in the Americas but not only in the Americas.

So I think we have entered a time where all realize that the world is shrinking. And we are the customers of a lot of these countries, and so if we don’t... It’s in our own self-interest to help them have safer food, because that’s the food we buy.

Q I am somewhat reassured about organic foods at least. There’s a minimum, the standards and the labeling. This has not occurred for genetically modified foods. This is a hot button issue, but I’m very concerned about it because our country, again, seems to be isolated in the way they handle these foods. There must be a reason. I don’t think they just want to go against us. The European Union, Japan and now China, are rejecting these foods because they don’t feel there has been adequate investigation, inspection.

And now in our country we’re not even allowed to label these foods. There have, as far as I know, there have been no scientific studies that are open to the public so that we can make up our mind. All of a sudden they appeared on our table, and I really resent it – the corporations doing this, I felt, behind our back without adequate education. And I think this is what Europe, Japan and China are also concerned about.

So I wonder when are there going to be plans for labeling of these genetically modified foods? And when can we reassure the rest of the world with our scientific studies that these foods are safe.

M Thank you very much – another good question. Well, genetically modified foods... And Dr. Borlaug actually knows a heck of a lot about this; I’ve heard him speak on this topic

many times. One can think that we've had genetically modified foods for many generations, maybe not through manipulations in a laboratory – through cross-breeding and other techniques that are time-honored techniques – and have resulted in crops that have been, in the true scientific definition, genetically modified, just not through modern genetic technologies.

And I think what your, the concern that some people have is that perhaps what you do in the modern technologies of genetic manipulation somehow makes those foods unsafe. The research that is available has not shown that to be the case at this point. I believe that the government of the United States certainly, which has as a mission the protection of the public's health, takes very, very seriously the regulations that it imparts on foods, whether it be regulations through labeling or some other requirements, to make sure that people are protected from harmful foods.

In the case of genetically modified foods, that has not been the case because the research just does not bear that out. Why other countries choose to adopt what is termed a precautionary principle, to be overly cautious, and even though there's no scientific data to prove that these foods are harmful, to go ahead and apply a label just so consumers will know – that's a very hot issue as you know very well, very hotly debated. The merits and the lack of merits are debated constantly in the world scene, through the ___ Commission and other institutions.

So what I can tell you is, as a regulator myself in charge of the Food Safety and Inspection Service at USDA, we take very seriously our job of making sure that when we say something is safe, that it is safe as science tells us that it is. The labeling issue then comes as a result of people wanting to know for their own information because of their own preconceived notions. And this is something that we haven't resolved yet.

We'll have to debate some more and see where we stand on that issue, because it's a question of, do you use a label to warn people? And if you use a label to warn people, you need to have a reason to warn them about. Thank you.

KQ Secretary Murano, thank you very, very much for an engaging keynote speech. And I want to say that I think in a year when we have a Cuban-American as our laureate to have the highest-ranking Cuban-American woman in the United States Government here to keynote the speech is not only a testament to the incredible hard work and success of Cubans who came to Americans to make new lives but also to the fact that, having been born close to the soil, it's always remained with you. So thank you.