IDEAS IN ACTION WITH JIM GLASSMAN

TCS Host Jim Glassman speaks with Ambassador Kenneth M. Quinn

By James K. Glassman - September 25, 2000 12:00 AM

How do you feed the world? One great way is to allow smart people to develop new ways of growing crops. To honor these smart people, The World Food Prize Foundation annually recognizes scientists who fight hunger by contributing to the world's food supply. TCS Host Jim Glassman spoke recently with Ambassador Kenneth M. Quinn, President of the Foundation.

Jim Glassman: Ambassador, for our Tech Central Station readers who are not familiar with the World Food Prize, can you tell us a little bit about the prize?

Ambassador Quinn: Sure. The World Food Prize was started in 1985. It's intended to be a Nobel-like award for food agriculture science, to recognize those types of exceptional breakthrough achievements that add to the availability, the quality or quantity of food and which have an impact in reducing hunger, poverty, chronic malnutrition. The award was established by Nobel Peace Prize laureate Dr. Norman Borlaug, who I am proud to say, is an Iowan, and who won the Nobel Prize in 1970 as being the father of the Green Revolution. And he was given the Peace Prize because there was in fact no Nobel Prize for food or agriculture just as there continues to be none. Dr. Borlaug thought there should be such an award and created the World Food Prize. It was first given in 1987. Since then, it has been given to laureates from China, Bangladesh, the United Kingdom, Switzerland, the United States and now, Mexico. There have been laureates from India, five from the United States. So, it's truly an international award.

Glassman: Actually, you mentioned Dr. Norman Borlaug and he's really one of the great heroes of the 20th century but a lot of Americans don't know his name. Can you just tell us very briefly what he did? You said he's the author of the Green Revolution.

Quinn: Certainly. Norman Borlaug was one of the first scientists who discovered how through cross-breeding wheat can be made to yield four or five times as much grain as had been previously possible. His methods were replicated by people working in rice, who also won the World Food Prize. And they in fact staved off famine in the world in the 1950s and 1960s because suddenly there was more than enough grain in many areas of the world to feed people.

Glassman: Could you tell us about this year's winners?

Quinn: Yes. I am pleased to say that for the first time, we have a woman laureate, Dr. Evangelina Villegas from Mexico, and she is winning along with Dr. Surinder K. Vasal, who is a native of India. They both have worked at the International Center for the Improvement of Wheat in Mexico. They did the painstaking detective work and they discovered how it would be possible to put two crucial amino acids into corn and thereby increase its nutritional value immensely. These two acids are normally not found in corn.

And particularly in Africa, you find a disease in which young children after they are weaned from their mothers' breasts are fed a sort of porridge made from corn and they begin to develop into having this very serious chronic malnutrition where child mortality is very heavy.

As a result of this breakthrough achievement by these two scientists, we now have about a million hectares that are being planted in this new corn called, Quality Protein Maize. And as a result of this in those areas that have it, these children -- the number who are suffering is greatly diminished.

Glassman: Now, Americans live in a country that has really been blessed with high-quality, inexpensive food for a long time, so in a way we sort of take it for granted. Where is the lack of food most acute right now?

Quinn: The biggest problems are in sub-Saharan Africa and in South Asia. It's there that we find most of the close to one billion people who are either malnourished or go to bed hungry every night as a result of a lack of food and sufficient nutrition.

Glassman: Right now, we hear a lot of fear about biotechnology in the growing of crops. Do you think this fear exists in part because we are able to take our abundant food for granted and that's why many people feel that we can just do without the science and technology?

Quinn: I think that's right. That's an issue that has been raised about questions of safety, about issues that predominate more in developed areas where people have enough to eat. But if you go to those developing countries that are more desperately in need of food and nutrition, the attitudes there may be different. And that's one of the questions that we are going to address at our international symposium this year. On the one hand, the issue of safety of genetically modified crops, the environmental impact, versus the need -- particularly in developing countries.

Glassman: Now, you are holding this symposium next month, and where is that?

Quinn: The symposium will take place October 12 and 13 in Des Moines, Iowa. We have speakers coming from around the world. We have the head of the Chinese National Laboratory on Genetic Engineering. We have two very bright, young women scientists from India and Africa. And we will have 11 World Food Prize laureates in attendance who along with Dr. Borlaug make up one of the greatest aggregations of scientific talents I think ever assembled in one place.

Glassman: Now, based on what you know at this point, how important is biotechnology to an abundant food supply?

Quinn: I think the issue is still to be resolved and the question is not absolutely certain. We will have speakers who come from Africa who will say, it's crucial, it's absolutely necessary. We will also have one of our former laureates who will say that, we need to keep in mind that this is not going to be the panacea that we think it is and we should not expect as much from biotechnology and we need to go slower, given the environmental questions. And my hope is that, through our conference and other conferences like it, we will be achieving and working towards a global consensus on how fast we should go.

Glassman: By the way, the Mexican and Indian scientists who won this year's prize, did they use biotechnology in their work?

Quinn: No, they did not. Their prize is for conventional work. It was done over two decades in the 1970s and 1980s, and it's really a story of some incredible dedication.

Virtually every one had given up thinking this was possible, and the two of them stayed at it in this laboratory in Mexico City, and through a painstaking series of tests and tests again and review, suddenly found their Eureka moment. And they found one part of one seed where the lysine and tryptophan were contained and they slowly cross-bred that with other seeds in conventional methods and eventually produced a seed that would get all the yield that is necessary. It would be attractive and edible for people who grew it and it would be nutritious. Right as they were getting to that achievement, all of their funds were taken away and people turned in another direction. And the two of them just hung on, stayed with it and eventually were sort of rediscovered.

And thanks to groups like Sasakawa 2000 and the Jimmy Carter Center -- former President Carter is one of our members of our Council of Advisers -- demonstration plots were started in places like Ghana and in Central America and now you have QPM being grown in China and in Central America and in Asia. And the amount being grown is expected to double by the year 2003. So these are really unassuming [people] - nobody knows their names -- but real heroes who are making a huge difference for millions and millions of people.

Glassman: There was a scare this week involving some bio-engineered corn that may have ended up in Taco Bell taco shells. Do you know whether the corn in question poses a genuine threat to human health?

Quinn: I'm not an agricultural scientist, so I want to be clear at the outset that I don't know the answer myself. I have been following that issue in the paper, but the question is a terribly important one. And it is very important that we have the kind of testing that is necessary and the kind of scientific processes to determine that. And that's one of the issues that we are going to highlight at our symposium. And we're going to have the Acting Deputy Director of our FDA; we're going to have one of our former World Food Prize laureates, Perry Atkinson, who just did a study for the National Academy of Sciences. And we're going to have several people who are critics as well there. And I think that's the full test, that you have to assume that in this kind of situation where there is an important question, we can't just dismiss those kinds of concerns, and that we have to have the processes in place so that people can feel assured when they buy products that they have been tested and they are environmentally safe.

Glassman: But, let me ask you this way. What do you think would be the result if right now, today, government regulations or media pressure forced the abandonment of the use of biotechnology in the creation of new crops?

Quinn: I think if that happens right away, based on the information that is available out there, that would be a mistake with some very significant ramifications. The world population is not going to stop growing and as Gordon Conway, the President of the Rockefeller Foundation noted, we need to find a doubly green revolution, the new grain

revolution. And we need to explore every way that's available to see if it can be done because there's not going to be enough food to feed everyone and assure adequate nutrition if it's not. And so given the fact that the land that's in production now is yielding in many instances -- the yields are either decreasing or growing at a slower rate, we're going to rely somehow on some type of exceptional breakthrough achievement, just like Norman Borlaug... made to feed people. So, I would not want to see anything banned now based on the limited information we have. We need to be out exploring whether biotechnology can be safe and can work.

Glassman: As a last question, Ambassador Quinn, I know that during your long career in the Foreign Service, you worked in many places where people are not as lucky as they are in the United States as far as food is concerned. So, does the prize have a special meaning to you?

Quinn: Absolutely. I came back to do this job because I've been in places and watched people dying from starvation. And I saw as a very young Officer when I was deposited in the Mekong Delta in the late 1960s, I saw how life could be changed by two things. One was building a road because the great lesson to me was, technology or advances in agriculture, advances in education, in health go down the roads. Where the roads stop, all those types of advances stop as well.

And I saw how these new seeds that Norman Borlaug and others were developing really changed people's lives. Suddenly people who have been living on just one crop of rice, went to two and three. They were able to put in secondary crops. Their kids went to school longer...Girls went to school for longer periods of time. And so I am taken by the notion that it is possible to make a difference in uplifting people who live on the edge in villages and that's what I hope the World Food Prize could really be about

Glassman: Thank you very much, Ambassador Quinn.

Quinn: Thank you for your interest.

Tags: Science and Technology