SYMPOSIUM BREAKFAST
October 19, 2007 – 7:45 – 9 a.m.
Speaker: **Charles O. Holliday, Jr.**

Ambassador Kenneth Quinn
President - World Food Prize Foundation

There's a special DuPont connection to Dr. Borlaug because this was his first job out of the University of Minnesota during World War II. And so he went to Wilmington and was working there – isn't that right, Norm? – working in Delaware and worked for DuPont there until the time came that he could be released from his wartime service requirements. And then the new program was just starting in Mexico and he went off there on his great agricultural and humanitarian odyssey, and now he's back this morning, back with the Chairman and CEO of DuPont.

Now, the other thing I noticed was that the year Norman Borlaug received the Nobel Peace Prize was also the year that Chad Holliday started working at DuPont. So there's a lot of connections here that are wonderful.

But our speaker this morning, Chad Holliday, has served as the CEO and Chairman of DuPont, a longtime developer and producer of a variety of science-based materials and services. DuPont is the parent company of global agribusiness leader Pioneer. We're so pleased to welcome so many folks from Pioneer who are here with us today and from the DuPont side here in Des Moines. Thank you all for being with us.

And Pioneer and DuPont are pursuing a multipart strategy to improve current biofuels production and to partner in the development of the next generation of biofuels technology. Last month, DuPont and Pioneer announced a partnership with Iowa State University. President Greg Geoffrey was with us last night and moderated our panel yesterday afternoon. And they're going to support the first U.S. research effort to focus on cellulosic ethanol production in an on-farm setting. And if you heard everything, there is one message that comes through – this is the place to be looking for what the future of biofuels can really mean in being a viable part of our fuel industry.

Mr. Holliday is an industrial engineer by background, and after receiving his bachelor's degree from the University of Tennessee, he rose, going with DuPont and has rose to lead the company. And one of his missions has been to achieve sustainable growth and enhance the company's impact, and that of its product on the environment. And we are so pleased to have him with us today. Please join with me in welcoming Chad Holliday.

Charles O. Holliday, Jr.
Chairman & CEO, DuPont

Good morning! Good... Ambassador Quinn, that was a fantastic party last night. Where'd you learn to do that – Cambodia?

It's a great honor to be here. I've got a couple things to share with you, and they say there will be a little time for questions or suggestions. Or I've got my order book if you'd like to buy some DuPont products, too.

I've been on a recruiting mission this morning to try to re-recruit one of our graduates, Dr. Borlaug. I told him he's been away way too long, it's time to come back. He hasn't said no yet, so I'm still working. But I must tell you my version of his career with DuPont, which started in 1942 as a microbiologist. And he joined to research in agriculture, during a very fine time and really the start of that industry, a whole series of chemicals that made a big difference in agriculture.

But as we all know, on December 7, 1941, there was Pearl Harbor, and our labs were taken over by the U.S. government, along with some of our plants. And so our ability for Dr. Borlaug to focus agriculture was changed, and he had to focus on the wartime effort. But as I looked back through our archives, I found that first effort he worked on particularly unique. So there was a group of Marines marooned on an island in the South Pacific, and the enemy forces controlled the air and controlled sea so we could not get rations to them.

So the idea was we would take speedboats at night and we would put containers, and we'd throw them off and they would wash to shore, and then when it was safe, Marines would come out and get some food. The catch was, the glue in the containers couldn't hold up under the warm salt water, so by the time the food got to shore, it was spoiled. Dr. Borlaug's team was given that challenge to come up with a glue that could hold the containers together. And our archives said they did that in three weeks and one day. So you were working on food in a lot of different ways, sir. [applause]

Let me share one notion with you today, and that's around the trend that we see that is right on target with the World Food Prize and what the people in this room are dedicated to do. And that's population growth. I may look old but I'm not that old, and in my lifetime the population has doubled. And we can expect to go from the six and a half billion today to eight billion from 2025, and who knows exactly – but what we do know is that growth will be in developing companies.

And our observation is – it's that growth in population that's the fundamental driver of some of the greatest opportunities in the world, and also the greatest hazards. As you think about your work in food, I'd like you to expand it to the total system we're a part of, and that's food, energy, and material. Because they are a total system, and if one is stressed, the other two can't get by without being stressed, and vice-versa.

I'd like to share with you a bit of that perspective. First, in food. But let me state some numbers I think you know in one form or another, but not perhaps in this form. In the last ten

years we've had a 13 percent in increase in global population, but a 32 percent in meat production, 29 percent increase in corn production, 59 percent in soybeans.

So what we clearly see, that we get a multiplier effect – as developing countries move up to a higher standard of living, they want to consume their protein in different ways. And the reality that I think we all know in this room is the amount of land available for farming has only gone up 2 percent in that period of time.

So the way we have made the equation work is certainly productivity, and productivity has taken many different forms. But our message today is: if we don't continue to increase that productivity, obviously, we have a different equation. I believe you would not be here in this room if you disagree with that assumption.

We believe biotechnology in crops, a relatively new applied science – the first crops were introduced in 1995 – is a big piece of the answer. And our company is dedicated to providing part of those solutions. We now have 22 countries that accept biotech crops and grow them. There was a 13 percent increase in hectares under cultivation of biotech last year, '05 to '06, and I expect another increase this year.

The issue, as you know, is acceptance and understanding of technology. Dr. Borlaug and I were talking about one of our biggest challenges of the times is, how do we get the public to understand science enough to accept it and trust scientists? And that is one of our biggest challenges. We try that in a number of ways in DuPont, but I think to a great extent the World Food Prize is about that acceptance.

One step we've taken that I would share, and perhaps others would want to use, is an external biotechnology advisory board, of which some of the members are here today – welcome very much. We've had that in place for about eight years, and it's been extremely helpful to us to have people from China, India, Mexico, France, Brazil, and of course across the United States, give us their perspectives, because they look at it a bit differently. We actually have a priest on our biotech advisory board now to help us understand how different religions might look at the issues. I've found that extremely important.

And what the biotech advisory board helps us do is transparency. We know we must be completely open, and they make sure we do that from other people's perspectives, not just the way we would look at it. And be sure that we're thinking about all the stakeholders that think they might have a say to what's going on.

The first leg of the three-leg platform was food. It's critical. Technology is essential for us to meet the growing needs of the world.

The second leg is energy. And let me describe energy in terms of climate change. Now, we're going to run a little poll. First, how many have seen Al Gore's movie? Now, how many people actually paid to get in?

Climate change, in our view at DuPont, is real. We were involved in the ozone layer issue and the phase-out of CFCs with the Montreal Protocol – a quite successful effort when the world

came together to deal with a major environmental problem effectively. Climate change is so many orders of magnitude larger an issue, that I can't even compare them, but the world did it once, so let's do it again.

Exactly when we will see climate effects? Is everything in Al's movie exactly right? I wouldn't say that, but I think the trend and the issues are there. Of course, everything that happens in weather – the fact it was raining today, I'm sure, is climate change. So obviously that's not the case. But we do believe there's time for action.

I'm very pleased our company, along with some others, formed a group late last year called the U.S. Climate Action Partnership, and we are trying to influence our leaders in Washington to establish some "rules of the road" legislation so our country could be a leader but we could do it in a way that we don't destroy our economy.

Let me lay out three things that I think are critical. If you have a chance to weigh in on that debate, I hope you will consider them.

First, the problem today is we don't have the rules of the road. If companies take very early action now to reduce energy consumption, to reduce CO_2 emissions, they're not sure they're going to get credit for that. And so we have companies holding back. I'm proud to say it's not our company – we've had a 72 percent reduction. But as I talk to my colleagues in the industry, it's a reality. The quicker we can know the rules and we can know the price of carbon, I think you'll see an unleashing of technical capability to make a difference.

Second, it's clear to us, in energy it will take multiple vehicles to drive this road. If we're looking for that one answer to ninety-dollar oil or something like that, if we're looking for one answer, it will not be there. It will be multiple steps.

Our company is working very heavily in biofuels. We started with the Department of Energy seven years ago on cellulosic ethanol. We are extremely pleased with our progress. We were honored earlier this year when President Bush came to see us right after the State of the Union address to assess our progress. Since we are spending his money, he said we should. I should have told him it was my money we were spending another way around, but he didn't appreciate that too much.

What I did find was he was very knowledgeable. If you've been involved on these presidential visits, they give you this sheet – this is what the President knows. He knew a whole lot more than what was on that sheet, and he was quizzing our scientists about what they could do, and taking notes, and Sam Bodman, the Secretary of Energy, was with us, and he was giving Sam kind of "go-do's" through the thing.

So I would just say that I'm very pleased with the word out of Washington. And we're working on a pilot plant with a partner here in Iowa for a scale-up, and we're quite encouraged by what that could mean. We're not there yet, but hopefully by about 2010 we could see a real opportunity for farmers where their cellulosic could be a new crop, and it could deal with food issues and deal with energy issues at the same time.

The second area we're working on is biobutanol. It's another energy form other than ethanol, also biologically derived, and more of a technology challenge. We've partnered with BP on this because we thought it was very critical to have a major oil company as part of what we're doing. I would say we're very encouraged, and we'll be selling a little bit commercial biobutanol at the end of the year. We won't be making money on that; our costs are still too high. But hopefully by about 2010, we could have some commercial facilities there.

So there is hope in the biofuels area, and I think this region of the country will obviously play a very big role in that, along with the steps we're taking through Pioneer just to make sure we have higher yields, which is a fundamental step, of course, on both ends of the equation.

The last thing I would challenge, and maybe this could be stuff that would maybe be a World Food Prize winner someday. Al Gore's a fellow Tennessean – if you did see his movie, you saw it was mostly about the fear, the bad things that can happen. What we need is a scenario about why it would be a good world to live in where we're fundamentally operating in a different system. And that's what it's going to take. The Japanese government's slogan is "Cool Earth 50," a 50 percent reduction in carbon dioxide by 2050. That's a major change in life as we know it. I think it could be a very good life, and we need someone to paint out the positive picture.

My last point is on materials. And as a materials company, DuPont, a science company, we focused on this first. Before we worked on energy, we said – how can we use bio-derived material? And we're quite excited about what we can accomplish. Today we have commercially available – I highly encourage you, if you're buying carpet for your home, look for our Sorona – it's made about 50 percent from corn, Iowa corn, by the way, even though our plant's in Tennessee. They don't like Tennessee corn. They bring Iowa corn up – a true story. It's Sorona. It has a very nice feel to it. It's naturally stain resistant, and it takes up dye real well, so I think we'll have useful colors. So you can look for that in your carpet store – the first really new carpet is commercial.

But we are also very excited about bio-derived materials that might do very unique things. We've had a program for four years on hair dye that's bio-derived. So some people are concerned about using chemicals on their hair, so our bioproduct knows how to attach just to gray hair, if that's what you want. But you've got to have some hair to start with. We can't do the other.

But what we're finding is we're understanding biology in a much deeper way. The opportunities to solve problems that may be much more serious than how to dye your hair are just unthinkable in their magnitude. So we're quite excited.

So let me sum up by saying there is one fundamental trend that we keep paying attention to, and that's population growth and the fact that that population growth is coming essentially all in developing countries. So we in the developed countries must be sure we're bringing the whole world along with us, or this equation won't work. If we try to solve food without thinking about energy, without thinking about materials, or any one of these without the others, we think the equation won't work. So I urge you in your work to take into account the entire equation.

Thank you very much. I'd love to take your questions.

Ambassador Kenneth Quinn
President - World Food Prize Foundation

Thank you very, very much, Mr. Holliday. It's wonderful for our final day of our symposium. And I want to note that our symposium was *Biofuels, Biofoods, and Global Challenges* –exactly what you're saying. Can't have one without the other. So your remarks are right on and to the point.

We are so pleased to be working so close with Pioneer here and also with DuPont, in many of the areas. And we're looking for nominations for the World Food Prize, so if we could encourage you, in your appropriate position to send them in.

Question and Answer Session

So questions. We have microphones right here.

Q Hi. Thank you very much. I am really impressed with what your company did in trying to be carbon neutral. I understand you established a vice presidency in 1990, that early, to work on that issue. One of the big questions that comes up when I talk to people about being carbon neutral is – how much is it going to cost? It's going to backup my company. And I understand you have a different story. Could you tell us that story?

A Are you a shareholder?

Q No.

A Had to make sure I knew what angle you were coming from there. Let me tell you how this thing started – I love this story. We have a plant in New Jersey. It was November, a rainy day; Greenpeace climbed the fence, climbed the water tower, unfurled a big banner: "DuPont No. 1 Polluter." "Polluter" at the bottom, aimed toward the Delaware Memorial Bridge – everybody that comes to work can see that. They did an excellent job getting over the fence and getting on the water tower, but they weren't good planners, because the word "Pollution" was so low you couldn't see it, and all the phone calls were, "You won another award; we don't know what it was." We were sitting there the next day, and patting ourselves on the back because our plant manager did a great job. Because you know the TV trucks happened to roll out about that time, and he was concerned about getting these folks down off the water tower without falling. And they actually gave us great credit for how we handled it. Dr. Borlaug, you'd have been proud. But one soul on the edge of the corner stood up and said, "You know, but they're right." And you could have heard a pin drop. "What do you mean they're right?" "Well, we do put out more stuff than anybody else in the environment." "But it's all legal." "But we do put out more stuff." "Well, we're the biggest." "But we do put out more stuff." That's what got us thinking about this.

And so we said, why does it have to be that way? And our fundamental premise was – every project is going to earn at least the cost of capital. And everyone did. And we have to give it priority, and so it took a different way of life. It took an internal cap and trade. It had to change people's mindset, that everybody had the idea that an environmental project was going to hurt the economy of the company, and no business leader wanted to use their funds for that. They wanted to use it to build a new plant. And so once we got some mechanisms to change it, it really made a difference.

So I'd say it worked. Now, our 72 percent reduction, I wouldn't say everybody can do that. I think we were very fortunate with our opportunities. And to say everybody could have good return projects and 72 percent reduction, I don't think that's practical, but I think it makes sense.

Q Among the concerns expressed by the developing world is the paradox that they believe they have not enjoyed the benefits of GM technology like the developed world has. When the developing world leadership comes to you and says, "What do you have in the pipeline? What are you going to do for us in the next decade so that we can join in this acceptance of biotechnology?"

A Great question. We have projects on the continent of Africa in sorghum. We support a banana plantation, and we're very eager to take our fundamental technology around maize and soybeans. We do think this technology is not discriminating for the big farmer where other forms of productivity improvement such as mechanization may be, because a small farmer wouldn't do that. We've worked extensively with the Carter Foundation because they have very good networks in developing countries of getting technology out and we have experience with them as a company.

And so we're quite ready to do that. The issue is for some other pressures that they're getting externally, there are some countries that should be using this technology that aren't. So I think one of the biggest issues is – how do you get the continent of Africa, more than just South Africa, accepting the technology that we're ready and willing – and I think it's actually to our benefit – to be sure that technology gets out.

And I think we can look at the example that's been used in AIDS drugs and the pharmaceutical companies that have finally come around in finding regimens that will work for the treatment of AIDS and making the drugs available at a reasonable cost. Our industry must follow that model, and I think our industry will. I think we've just got to break through the conception. Great question.

Other questions?

Q What do you see as the prognosis for European acceptance of the whole biofood areas to start breaking the logjam? Because you can't break it in Africa, you've got to break it in Europe.

A That's exactly right. What's putting the pressure on Africa is the European acceptance. I would have told you about a year ago I thought it was looking better. I thought we were

making progress. And of course there are a few crops that are approved in Europe. We've grown some in our Pioneer unit. And we've had some attacks on our crops. It looks like the current government plan is probably kind of heading in the other direction. So, yeah, I think the prognosis in the short term is not real good. But I think ultimately it will happen, and hopefully – that's one reason we want to work with BP on biofuels, to kind of get more entrenched in European countries to be a part of that. But Syngenta, one of our partners and competitors, is active every day and plays a key role in trying to move the European group. And I think we will with time, but I'm not hopeful for the short term. Wish I had a better answer for you.

I don't see anymore questions. It's been lovely. We've been very pleased to be a part of this. And Ambassador Quinn, a great party!