THE WORLD FOOD PRIZE

2017 Borlaug Dialogue International Symposium
"THE ROAD OUT OF POVERTY"
October 18-20, 2017 - Des Moines, Iowa

KEYNOTE ADDRESS Speaker: *Erik Fyrwald* October 19, 2017 - 2:50 p.m.

Introduction

Ambassador Kenneth M. Quinn

President - World Food Prize Foundation

So when I came back, retired from Cambodia to become president of the World Food Prize, it was very unusual to ever have CEOs or chairmen of major food or agricultural agribusiness companies come to conferences like this, as I was told. But I didn't know any better, and I invited the chairman of Syngenta to come in 2001, Heinz Imhof, and he came; and that started a wonderful pattern for which I'm very grateful. We've had Mike Mack here when he was chairman and CEO.

And today it's my pleasure to welcome Erik Fyrwald. Now, in this case I'm welcoming him back home, because he lived in Des Moines for five years when he was the head of DuPont Pioneer Nutrition and Agriculture here and has had a remarkable career with a background of being in chemical engineering and then being associated not only with DuPont Pioneer in its Agriculture and Nutrition Division, but he was also a president of Ecolab, cleaning and sanitation, water treatment and oil and gas products services provider, chairman and president and chief executive officer of Nalco, a water treatment and oil and gas products and services company, Group Vice President, as I said, of DuPont, and now is on the board of directors of Eli Lilly and Company and CropLife International and the Swiss-American Chamber of Commerce. He's come from Basel to address us and to bring the insights on this afternoon of amazing leaderships in agriculture and agribusiness here and to provide his insights. So please join me in welcoming Erik Fyrwald.

Erik Fyrwald

Chief Executive Officer, Syngenta

Thank you very much, Ambassador Quinn for that kind introduction. World Food Prize Laureates, Council of Advisors and honored guests, good afternoon and thank you for this great opportunity to speak with you today. It's an honor to be in the company of so many exceptional individuals who have really dedicated their lives to advancing food security. And it's a tribute to the visionary work of Ambassador Quinn that this venue continues to grow in importance, allowing us all to draw inspiration from the amazing Laureates, like Dr. Adesina, who has done so much to advance prosperity through agriculture in Africa.

And it's great to be back in Des Moines where I lived with my family for five wonderful years from 2003 to 2008, while running DuPont's Agriculture and Nutrition Division. There is no

place that feels more like the center of agriculture in the United States and no place where you can see more corn and soybeans everywhere you look.

Now, I want to make three points today as I reflect on what I see across agriculture. The first is that we are all very fortunate to be in this terrific industry, helping farmers safely feed the world and take care of the planet.

Secondly, it's great to see the progress in agriculture from technology advances, and from our standpoint, crop protection, seeds and digital tools that are increasing yields and reducing climate impacts. But at the same time it's unfortunate, and I've got to say frustrating, to see continued, unscientific attacks on important technologies. And these attacks can do great harm if we don't stand up for science-based decision-making. Now, we're making progress with some NGOs and regulators that are focused on science and risk rather than misinformation, politics and other factors. But we must have an open and honest discussion about what sustainable agriculture really is and not hide behind false fearmongering that leads to bad regulations and poor practices—and that openness needs to be on all sides, including Syngenta and our competitors.

The third point—it's exciting to think about the future we will create together as we keep moving technology and farming practices forward to feed all the world, helping alleviate poverty, including more in Africa. And we can do this by delivering major reductions in the 35% of all greenhouse gases that today are emitted from agriculture, and the 70% of the world's fresh water that's used by agriculture.

And let me go a little deeper into each of these three points.

First of all, here's why I think agriculture is the best place to be. It was October of 2015, I'd been a CEO, as Ambassador Quinn mentioned, of a company outside of agriculture for a while. And my wife and were on a trip to Africa. We went to Tanzania with an NGO that we've supported for years, called World Vision, to see the work that they're doing on the ground. We landed in Kilimanjaro but then went hundreds of miles away from any city to a small town they called Makandube. It was hot, humid, muddy, lots of mosquitos, and there wasn't a Marriott anywhere to be found. But we quickly went out to a farming area and saw beautiful fields and welcoming smiles.

A Tanzania World Vision employee introduced us to a group of farmers, including a man by the name of Jonathan, who had with great emotion, Jonathan told us about how five years before, they had grown very little rice, could hardly feed their families because it was so low yield and so low quality, and they felt helpless. In dry years they couldn't even feed their families. They lived in mud huts, and their kids couldn't even go to school. But with the right support from World Vision and others, they had built irrigation ditches, were able to get the right seeds, fertilizers and crop protection products and were taught how to use them properly and safely. And now they are growing enough to feed their entire community and sell to the market to earn money and are now living in a brick home, and he's sending his kids to school and buying up additional farmland to cultivate.

We also met a woman named Mary who had been an outcast that nobody would talk to. But now she's a successful farmer, on her feet, taking care of her child, and she was feeding us in her brick home. We met other farmers with similar heartwarming stories. On the way back from that trip on the plane, I told my wife that deep in my gut I really miss the joy of being part of

agriculture. Six weeks later, I got a call asking if I was interested in the Syngenta CEO role. Well, I jumped for joy. And fortunately, my wife was just as happy even though we had to move. And now for the last year and a half, I've been thankful every day for the blessing to be back in agriculture and working with all of you to try and make a difference.

Now, here as we gather in Des Moines, surrounded by thriving fields that stretch as far as the eye can see, it can be hard to think about food shortages that still plague other parts of the world that many of you are familiar with. And the original Green Revolution saved an India on the brink of starvation, and other countries; but at the same time much of that revolution bypassed too much of Africa.

Enter Dr. Adesina. He has reached out to smallholders, offering greater access to agricultural technologies needed for their success so that they, their communities, their nations and their continent can start to feed themselves. And today we gather to honor his accomplishments and together focus on what more needs to be done and how we can do it. And in the past Syngenta leaders have addressed this gathering, offering our ideas to the conversation.

For example, we've spoken about the relationship between food security and national security. We talked about how, if people can't count on having enough food and if the price of food suddenly becomes too expensive for them to afford, the result can be social unrest and violence. Another time we outlined Syngenta's good growth plan—our commitment to improving resource efficiency, reviving ecosystems and revitalizing rural communities to reduce poverty.

We started this effort in 2013 by setting ambitious and measurable goals in six key areas that we want to achieve by 2020. One of these, by the way, is serving 20 million smallholder farmers every year in the developing world. We announced our goals to the world, and we check our performance through independent auditors using a network of reference farms across crops and regions. And you can see all of the data on the Syngenta website. And also the Syngenta Foundation for Sustainable Agriculture has participated in many World Food Prize activities over the years. They are working in developing countries with NGOs to help millions of precommercial smallholder farmers access badly needed farming technologies, training, insurance, financing, and connecting them to markets, helping them to become sustainable. And today we continue offering our support both in our words and our deeds.

More than four years ago, Syngenta entered into its first Memorandum of Understanding with USAID to help transform smallholder African agriculture. Earlier today, Ambassador Mark Green, who is the administrator of USAID, said in his keynote that USAID would provide a two million dollar grant to the Syngenta Foundation for a partnership in collaboration with the African Agricultural Technology Foundation to help smallholder farmers in five African countries access affordable, high-yielding seeds through local businesses.

We're also talking to USAID about supporting several African nations to combat the Fall Armyworm, which has been eating its way through fields of young corn and other crops. This horrific pest has already destroyed more than 740,000 acres of corn, which many of you know is a staple food for over 200 million Africans. Today I also signed an MOU with Ambassador Green that provides a framework for continued collaboration between USAID and Syngenta. And it outlines our intent to pursue shared objectives to empower farmers in Africa, Asia and Latin America by delivering better technologies to smallholders and connecting them to markets.

Now, public/private partnerships are key collaborations, and Syngenta supports these efforts wherever they make sense. In late May of this year, we joined more than 220 other business leaders from across the United States to urge Secretary of State Tillerson to support strong funding for the State Department and USAID because of the critical role they plan in these partnerships.

Syngenta has a number of such partnerships, and one example is that we're working with the innovative Vector Control Consortium and the Gates Foundation to bring our advanced mosquito control technology to Africa. And this is helping save thousands of lives every year and helping farmers stay healthy so they can focus on growing their crops.

Now, these are exciting times as we have entered a new era of innovation in agriculture, one that allows us to develop innovative products and services faster, more cost effectively and with less impact on the environment to meet the needs of both farmers and consumers. Let me explain. Many companies, including Syngenta, breed seeds for the world's major row crops and vegetables, and that work has always been done by experienced breeders who painstakingly toil in the fields to identify varieties with better, more desirable characteristics and traits.

But now scientists in labs and computers support these breeders with new biotechnologies and data science techniques to achieve more precise outcomes in less time. Statistics and data analytics have become increasingly able to unlock a plant's full potential. Data algorithms, together with advanced molecular markers, enable virtual trialing, so breeders can analyze potential genetic combinations before planting trials, accelerating genetic grains very greatly.

And data analytics are also becoming increasingly important for farmers. So not only great products for farmers but how farmers farm. Sophisticated algorithms give our seed advisers, for example, insights into each farmer's unique needs, taking into account their soil conditions, their growing history, their seed performance, the expected weather conditions and other factors so that we can help the farmers improve their seed selection and their crop protection approach. And we bring all this together for farmers in a digital whole farm management system that helps them apply just the right amount of nutrients, water and crop protection to sustainably maximize yields. And now we're starting to see that farmers are increasingly allowing food companies to tap into this database so the food companies can assure they're sourcing grains from sustainable farms; and that adds value.

Now, with all this focus on data analytics and algorithms, in addition to continuing to employ and hire skilled breeders, we're also hiring a lot of mathematicians, data scientists and biotechnology experts; and they all work together to help farmers. Genome editing, which we may have to find a better name for, is another exciting, new precise breeding tool that's helping step-change the way we develop seeds. We can now do by choice what nature has only been able to do by chance, and we do it a lot faster. Now, these techniques offer great potential to humanity if regulatory policy keeps pace. Plant breeding has a long and safe track record. Let's make sure the regulatory process keeps up and enables these products get to market when they're proven safe.

We're also creating exciting innovation in crop protection products that work with seed genetics and traits to increase yields. New advances in insecticides, herbicides and fungicides are helping farmers better deal with the enemies of their crops. The latest products, like our Adepidyn fungicide, are much more targeted and have less unintended consequences. And we're developing more biological-based crop protection products. One of these uses a naturally

occurring soil bacterium to keep nematodes from feeding and reproducing, keeping plant roots safe and increasing yields.

So the new era of innovation agriculture is upon us. Does it sound futuristic? It is the future for sure, but that future is already here in the U.S., and we can advance throughout the rest of the world with these technologies.

Now, I'm sure everyone in this room is familiar with skeptics who don't accept the need for technology in agriculture and even consider it a threat. And some think the answer is to go all organic, which they often believe does not use pesticides. Even some organic food retailers, and some big ones, claim the foods that they sell are produced without the use of pesticides. These claims are not accurate, and experts are beginning to call them out on it. But consumers are being misled, and the problem is getting bigger. Organic foods, as you know, are not more nutritious, and with lower yields, organic often requires more land and water and emits more greenhouse gases per unit of food production. And the pesticides used often require more volumes to be effective, and there is often use of heavy metal copper used as an organic fungicide. Organic is a great marketing success, and consumers pay high prices for the image. This is great for our margins as well, because we sell a lot of pesticides and seeds for the organic market, but I am concerned about the environmental impact potential if organic grows much more beyond the 4% it represents today without the use of better technologies.

Now the ability to feed another two billion people in the coming decades in a sustainable way is only possible if we have the freedom to operate with safe technologies. This is why we must have an open dialog about what sustainability really is and clear up misconceptions.

Now, as you may have heard, Syngenta was recently acquired by a company in China who takes the long view and wants us to continue to develop and bring sustainable technologies to the world to help ensure that there is always going to be enough food for everybody on the planet, including the 1.4 billion Chinese people. They understand with the U.S. being our largest market that we look to help build bridges between this, the greatest agriculture producing company in the world, and China, the greatest agriculture consuming country in the world.

And here in Iowa and across the United States, we will continue to support U.S. farmers and the good-paying jobs our industry creates here. We have been and continue to expand our operations in the United States, because this is where our global seeds business is and much of our crop protection operations are. And it's where we are based to serve the U.S. farmer and to take that support to our capabilities around the world.

In addition to doing more here in the U.S. and around the world to better support farmers, we will do more to help farmers in China not only improve their yields to better support the Chinese agriculture but also to help address the large environmental challenges that the Chinese government is greatly concerned, and the Chinese people are greatly concerned about.

So obviously, to provide food security for more than nine billion people, we need governments, NGOs, educational institutions, researchers, farmers, and our competitor innovators all in this together—everybody in this room. And we will accomplish much more through collaboration and friendly competition. That is why we are all here.

Now, the innovative spirit of Dr. Borlaug saved over a billion lives. And now Dr. Adesina is advancing that call in Africa where innovation is needed most of all to help Africa meet its dream of becoming a continent that can feed itself and no one goes hungry.

I am optimistic that we together will get there and prove worthy of this great challenge. And you can count on Syngenta to continue to do its part. Thank you very much.

Ambassador Ken Quinn

That was terrific, thank you. Wasn't that great? Let's have another round of applause for Erik Fyrwald. Erik, just to say one thing, is here. His office is in Basel in Europe. The company now is owned in China, and I take a lot of heart in the fact that it's somebody from Des Moines who's in the middle of that and bringing it all together to focus it to Africa. That is the new world of agriculture, agribusiness and seed industry. So, I'm glad that you're there. Thank you for being with us today.