2025 Norman E. Borlaug International Dialogue
Session Title: C-Suite Connect Series
Date: October 21, 2025

Speakers

- Introduction: Han Chen | 2024 Top Agri-food Pioneer and Co-Founder and Chief Executive Officer, ZeaKal
- Trevor Hohls | Global Head of Seeds Research and Development, Syngenta

Transcript

Han Chen:
So, good morning, It's such an honor to be back here in Iowa at the World Food Price. Thank you again for giving us the stage. As a seed company, whenever we plant a seed, we plant potential for that season. The potential to feed your family and more importantly, the potential to feed the world. And as a seed company, as a seed executive, I couldn't be more honored to introduce our next speaker who shares that vision.

Dr. Trevor Hohls is a respected leader and seasoned professional whose career reflects a long time commitment to transforming agriculture through both innovation and science. Trevor's journey is deeply rooted in his passion for improving how we feed the world. With a PhD in quantitative genetics and plant breeding, he brings not only deep technical expertise, but also a constant and genuine curiosity and commitment to making agriculture more sustainable, efficient, and most importantly, resilient. So Trevor directs a worldwide team dedicated to advancing the next generation of seeds and technologies that help farmers grow more sustainably and efficiently. He has been instrumental in driving Syngenta's digital transformation, integrating data science, genetics, and technology to create practical science based solutions that strengthen food security and environmental resilience.

Despite this very, very accomplished background, at the core is a very simple belief. Trevor believes that science must serve the farmer. From his early days in South Africa tackling quantitative genetics and environmental stress response, he never lost that core focus. He leads by co-creation, building research closer to farms, connecting labs with the people working the land, and accelerating innovation so that breakthrough genomics, automation, and data can be turned into tools that

growers can practically use in the field. So Trevor isn't just a scientist, he's a bridge between data and dirt, between theory and reality.

Throughout his career, Trevor has been known for blending science with purpose. He leads with integrity and clarity, always keeping growers, partners, and the planet at the heart of his work. His work reflects a thoughtful balance between visionary thinking and practical execution, qualities that earn him recognition throughout our industry. With more than thirty years of experience in agriculture innovation, he has shaped breakthroughs across the major crops, including soybeans, corn, wheat, and rice. But beyond the achievements, what stands out most about Trevor is his passion for collaboration and his belief in people.

He mentors talent, he fosters innovation, and he inspires teams around the world to think bigger. So please join me in welcoming an advocate in agriculture advancement, a trusted voice in shaping the future of farming, and a pioneer for driving the future of agricultural science and innovation, the Global Head of Research and Development for Syngenta Seeds Field Crops, Trevor Hohls.

Trevor Hohls:
Distinguished guests, fellow agricultural innovators, and friends, it's truly a great honor to be here to present to you today. The World Food Prize does such tremendous work to elevate innovations and inspire action to sustainably increase the quality and accessibility of food for all. For over three decades, my journey in agricultural innovation has been driven by a personal mission to transform agriculture, to ensure sustainable food security for generations to come. As the global head of R and D for Syngenta, I have the privilege of leading a remarkable team of scientists and innovators who share this passion. Together, we're harnessing the power of breakthrough, germplasm, and trait innovation, along with the latest digital and enabling technologies to solve farmers' biggest problems.

Most importantly, these innovations must work in harmony with the very soil that feeds and sustains us all. Sustainable global food security depends on us taking care of the health of our soils. This has shaped both my journey as a plant geneticist and our company's commitment to accelerating innovations that leave the soil healthier after each harvest, capture more carbon from the atmosphere, and protect biodiversity, all empowering farmers' success. Now, although I wasn't raised on a farm, my childhood on South Africa's East Coast opened my eyes to the extreme

poverty and suffering of many people in Africa. These early experiences motivated me to pursue a career in plant breeding, driven by a dream of creating a world free from hunger.

I remember meeting Dr. Borlaug at a quality protein maize meeting in Brazil, in Brazil in 1994, when I'd just finished my PhD. I was struck by his humility, but more than that, it was his singular focus on feeding the world through agricultural innovation. In fact, I'm reminded by one of his famous quotes when referring to the potential of Sub Saharan Africa. “The potential is there, but you can't eat potential.”

Dr. Borlaug certainly inspired me to chase my dream, and challenged me that agricultural innovation is not enough unless it translates into more food. Today's challenges demand unprecedented collaboration, and you've heard that through this morning. Climate change is degrading our soils at an alarming rate. We lose approximately 24 billion tons of fertile soil annually, and this leaves us with only 60% of earth's soils for agriculture, since the rest is classified as being degraded.

In addition, soil erosion results in significantly reduced crop yields. And combined with economic disruption and ongoing regional conflicts, this soil crisis threatens not just food security, but global stability itself. To address this challenge, we need accelerated ag innovation on a scale similar to Doctor. Borlaug's Green Revolution. He enabled it by focusing on the right technological package that could increase yield in wheat, rice, and other crops.

That package included breeding high yielding varieties, restoring soils to optimal fertility levels based on available water, and controlling weeds, insects, and diseases through genetic resistance. Today at Syngenta, we base this technological package on optimizing the germplasm by trait, by environment, and by management factors that lead to growers' higher yields. Our world class technical capabilities across germplasm and traits, fertilizers, and crop protection, and biologicals enable us to deliver a systems based solution to de-risk farming. I'd like to briefly highlight some of these innovations. Firstly, in terms of genetics.

Most of our effort in crop improvement is spent around optimizing the product pipeline, so we can advance climate resilient crops faster than ever before. Dr. Borlaug knew this, and a big part of his success in wheat was due to adopting what was known as shuttle breeding to reduce cycle time and develop more stable

products. The past 15 to 20 has seen true breakout innovation with the convergence of genomics, phenomics, AI, and big data. This has enabled us to shorten timelines drastically, accelerate the rate of genetic gain, and improve product success, even under challenging conditions.

Now, hybridization has also been a critical factor within our breeding programs. We are humbled to be the first to bring hybrid vigor to Europe's wheat fields next year with the launch of our Xterra hybrid wheat trait. And, we recently opened a state of the art innovation center in Hyderabad in India to accelerate the development of new rice hybrids, as the hybrid rice market in India is set to double by 2030. Then, in terms of traits, our pioneering legacy in trait development spans the full spectrum of innovative traits, from native traits to GM traits and gene editor traits that address farmers' most pressing needs. As the first company to commercialize BT corn, we set the standard for biotechnology advancement in agriculture.

This foundation of scientific excellence continues to evolve throughout our trade portfolio. The Viptera family of traits stands as a testament to our innovative leadership in traits, delivering the industry's most effective and durable above ground insect protection. Then, in terms of the environment, our soil scientists are decoding the intricate plant soil relationships, revolutionizing our understanding of soil health and biology. We're investigating how microbes interact with plant roots in the nitrogen cycle to influence yields, and are studying their role in withstanding challenges like drought. Our approach combines traditional expertise with cutting edge technologies from satellite imagery, to advanced sensor networks, and high performance computing.

We're particularly excited about our real time AI analysis capabilities, where we can detect fungal spores and disease indicators before they are visible to the human eye. In terms of management then, finally, the top growers are those that intricately understand their fields and can effectively manage around the limitations of the environment. To do this, they need the best products to optimize and protect yield in the form of fungicides, insecticides, or seed treatments. Our digital farming solutions empower growers with real time decision making capabilities, preventing crop failures, and optimizing yields, while championing sustainable farming practices. The advancement of multiomics data integration and sophisticated AI models is rapidly propelling genetic research forward.

We're now entering a very exciting phase where our next gen AI pipeline doesn't merely optimize the current process, it fundamentally augments it, allowing us to develop products by design, rather than by chance. We are starting to precisely engineer the genetic variation that we require, leading to more predictable and targeted outcomes, even under climate stress. As climate change reshapes agricultural landscapes, it's important that every innovation serves the triple purpose of supporting farmers' livelihoods first, enhancing food quality next, and then finally, protecting our environment for future generations. Let me give you just quick two quick examples of how we're doing this. Firstly, there's the Reverte program in Brazil.

Since 2021, our Reverte program of promoting regenerative agriculture has transformed more than 265,000 hectares of degraded pasture land into productive cropland. By providing farmers with technical expertise, digital tools, and financial solutions, we're proving that environmental stewardship can go hand in hand with agricultural productivity. The second example is our Energen corn trait that's built through a partnership through McDonald's USA and Lopez Foods. Energen is a disruptor in the industry, and it's designed specifically to produce an enzyme known as alpha amylase that can break down complex starches into sugars more efficiently in cows. And, it generates a major sustainability benefit of requiring less inputs from growers, and also a smaller carbon footprint across the supply chain.

Sustainably feeding the world, while regenerating our planet, demands immediate action. Agriculture stands at a pivotal moment. The transformation from climate challenge to climate solution requires enhanced policy support, sustainable farming incentives, and frameworks that expedite the adoption of new innovations. Our vision of being the most trusted and collaborative team in agriculture acknowledges that we can't do this alone. Through partnerships with farmers, researchers, NGOs, and governments, we're developing and scaling these solutions from ground up.

The World Food Prize reminds us that food security and global stability are inseparable. Let us honor Dr. Borlaug's legacy by advancing solutions that not only feed humanity, but nurture the very foundation of agriculture itself. The science exists. The solutions exist.

Farmers are ready. What we need now is greater speed and deeper commitment. The time for action is here. Thank you.