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Title: Food security and the agritech revolution

Brief Biosketch

Through the invention of novel chemicals and biologicals for biotic and abiotic stress management, Camilla Corsi, Head Crop Protection Research at Syngenta, growers are able to address the multiple challenges they face in today's complex world.

Camilla leads Syngenta's CP Research organization - a passionate team of some 700 scientists, located at five world-class research sites in five countries - delivering excellence in design, synthesis and biological evaluation to discover, optimize and develop industry-leading solutions.

With a strong track record of delivery, Camilla has made a particularly significant contribution to the invention and development of Syngenta's fungicide SDHI class (sedaxane, isopyrazam, SOLATENOL® technology and ADEPIDYN® technology) and to the shape and quality of the existing crop protection research pipeline.

A chemist by training, Camilla has been with Syngenta since 2004, holding various leadership roles across Chemistry and Portfolio. As a leader, she has a proven ability to foster effective teams and to build the relationships that bring winning innovation into the hands of growers.

Camilla graduated in Chemistry from Florence University and holds a PhD and Postdoc in Organic Chemistry from University College London and Ecole Polytechnique Paris respectively.

Abstract

Over the past two years, we have seen first-hand that no one should ever take our ability to feed the world for granted. The pandemic, geopolitical conflicts, supply chain disruptions and extreme weather threatened the global food supply. And the ripple effects from this very real threat – food shortages, empty shelves, and skyrocketing prices – were shocking. The danger has not passed.

Innovation is fundamental to secure food security. But the innovation landscape itself is also changing. Recent advances in data science, novel analytics, and artificial intelligence are now game-changers.

The agricultural industry has already delivered tangible benefits to society but, in the future, our innovation will broaden from a focus on pest, weed and disease control, to include holistic plant and soil health, to improve the resilience of crops to environmental challenges and increase their ability to use natural resources and improve soil fertility. We will see new diversity in chemistry, biological products and completely novel technologies such as proteins and RNA. Synthetic chemistry will be revolutionized by artificial intelligence-guided design to find molecules simultaneously combining targeted efficacy with all of the safety and sustainability requirements for a modern product. New Seed technologies will make crops resilient and healthy to withstand many of these agriculture threats while securing productivity.

Digital technologies will also allow us to bring products to farmers faster, designed from the outset with a closer fit to their individual requirements and ability to predict their effects in local agricultural systems.

An ecosystem approach is the solution and innovation is the enabler for food security.