

Food for Thought: The AgRevolution Shaping What We (Will) Eat

Co-chairs:

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By 2050, the world population is expected to increase by a third, and so will the demand on our agricultural systems. At the same time, higher temperatures, severe weather events, and the rise of new challenges caused by climate change will affect agricultural output. Ensuring food security along with making agriculture more sustainable are imperatives, as the sector is a significant contributor to greenhouse gas emissions. Fortunately, novel and exciting technologies are being developed that will transform what we eat, how we grow food, and what it means to be a farmer in the 21st Century. This session will offer a small sample of the many ways in which engineers are revolutionizing agriculture.

Our first speaker, Aaron Hummel from Pairwise Plants, will introduce genome editing technologies and describe recent examples of their application to engineer more resilient crops. Next, Kyle Schneider of Vestaron will expound upon novel pest management strategies and new biological based compounds for crop protection. Subsequently, Patrick Cournoyer from the U.S. Food and Drug Administration will elaborate on how the food safety of genetically modified crops and other biotechnology-derived products is ensured before reaching consumers. Finally, Sierra Young of North Carolina State University will present new developments in Precision Agriculture and the application of advanced robotics and automation technology towards more efficient food production.