

What is a Food System and Why Should We Care?

Fera Science Annual Symposium 2021

Monday 8th - Thursday 11th Nov

We invite you to join the Fera Science Ltd & IAFRI online Science Symposium 2021

The Fera staff and student annual Science Symposium is taking place over four half days, from **Monday 8th to Thursday 11th November** using a virtual platform 'Teams'. Scientists from Fera and colleagues from Newcastle University will discuss their current research in the context of the food system, focussing on cross cutting themes from our recently updated Science Strategy.

This year's Symposium will draw upon the theme '*What is a Food System and Why Should We Care?*' to highlight the unique contribution Fera is making to the Food System - We want to spark our collective imaginations on how Fera can make a bigger difference to the huge challenges across the food system.

This includes accelerating the introduction of new biological and chemical interventions to increase agricultural productivity, evaluating the safety of novel foods for healthier diets from sustainably sourced ingredients, supporting the restoration and creation of a healthy natural environment, and all the way through to ensuring that international laboratories are proficiently measuring the right parameters for their chosen outcomes.

During the conference, you will:

- ✓ Learn more about the work of your colleagues in the 'next corridor'
- ✓ Understand how your work impacts the food system
- ✓ Understand how collectively, your impacts can be greater by being joined up
- ✓ Work out how we prioritise areas of future research activity
- ✓ Stimulate and inspire the minds of our early careers scientists and all Symposium participants

Fera Science Symposium Programme 2021:

What is a Food System and Why Should We Care?

Guest speakers will lead 'Teams' discussion sessions across natural capital, regenerative agriculture and information data in the foodscape.

To confirm your attendance to join the virtual event, please register [here](#).

Monday 8th November - Symposium Opening & All Student Session

Session Chair: Adrian Fox. Session Moderator: Hannah Fenton & Katherine Wotherspoon

● 13:00 - 13:05	Introduction & Housekeeping	👤 Katherine Wotherspoon (Science Strategy Lead)
● 13:05 - 13:20	Fera Welcome	👤 Dr Andrew Swift (CEO, Fera Science Ltd)
● 13:20 - 13:35	IAFRI & NU Welcome	👤 Professor Rob Edwards (Head of School, Institute Director, IAFRI, Newcastle University)
● 13:35 - 14:05	Current Food System Challenges	👤 Professor Rick Mumford (Deputy Director of Science & Head of Science, Evidence & Research Division Food Standards Agency)
● 14:05 - 14:25	Q&A & Break	👤 All
● 14:25 - 14:50	Student 3 Min Talks	👤 All Students
👤 Ioana Lock	Aptamers and why should we care?	
👤 Ieva Lelenaite	Discovery and development of carbohydrate active enzymes (CAZymes) for degradation of plant pathogenic biofilms produced by <i>Erwinia amylovora</i>	
👤 Catherine Harrison	In-field pathogen detection using CRISPR/Cas biosensing technology	
👤 Emma Chapelhow	Using molecular techniques to monitor organisms in agricultural soils	
👤 Thomas Crocker	Forecasting light leaf spot on oilseed rape and vegetable brassica: an infection model	
👤 Alex Laverick	Developing rapid in-field crop viral detection devices through the use of ambient temperature amplification (A-TEAM)	
👤 Morgan Wodring	Determining the risk of Andean root and tuber crops (ARTCs) to UK plant health	
👤 Lucy Mallard	Diagnostics of septoria in winter wheat	
👤 Alis Prusokas	Utility and limitations of Short Read Sequencing for plant virus detection and discovery	
● 14:50 - 15:00	Break	☕ Break
● 15:00 - 15:25	Student 3 Min Talks	👤 All Students
👤 Matthew Baister	Plant pests and diseases spread throughout the UK via trade	
👤 Isla Thorpe	Threat of pets: Risk of companion animal medicines to biodiversity	
👤 Johny Hilaire	Risk perception associated with an emerging agri-food risk in Europe: Plant viruses in agriculture	
👤 Nicholas Allen	Tech to monitor hedgerows for agri-environment payments	
👤 Charles Brakspear	Insect frass from the insect bioconversion industry can provide sustainable crop nutrition and plant protection	
👤 Piotr Zaborniak	Druggability assessment of juvenile hormone receptor PAS-B domain development of next generation insecticides	
👤 Sean Mason	Black soldier fly derived chitosan for food applications	
👤 Hannah Fenton	Combating pesticide resistance using botanical bio-synergists	
● 15:25 - 15:30	Break	☕ Break
● 15:30 - 16:30	Impact Workshop & Discussion Session	👤 Laura Meagher (Senior Partner, Technology Development Group)
● 16:30 - 17:00	Student Talk Q&A	👤 All

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Tuesday 9th November - Natural Capital and Regenerative Agriculture

Session Chair: Jen Clements. Session Moderator: Lucy Brown

13:00 - 13:10	Setting the Scene	Glyn Jones
13:10 - 13:25	Biodiversity Monitoring	Naomi Jones
13:25 - 13:40	Dietary DNA	Eleanor Jones
13:40 - 13:55	Biopesticides	Trey Kucherka
13:55 - 14:10	Mapping Natural Assets	Paul Brown
14:10 - 14:30	Q&A & Break	All
14:30 - 14:45	Farmer Engagement	Jen Clements
14:45 - 15:00	Economics and Soil	Curtis McKnight
15:00 - 15:15	Ruminants & Regenerative Agriculture	Hannah Davis
15:15 - 15:30	Sustainable Crops in Tropical Landscapes	Marion Pfeifer
15:30 - 15:45	Q&A & Break	All
15:45 - 17:00	Round Table Discussion	Guy Thallon, External Guests - M&S, Leaf, GWCT, FAI Farms

Wednesday 10th November - Using Information and Data for a Sustainable Foodscape

Session Chair: Joe Holland. Session Moderator: Curtis McKnight

13:00 - 13:10	Setting the Scene	Adrian Charlton
13:10 - 13:25	Analytical Services in Relation to Honey	Mark Harrison
13:25 - 13:40	Upholding Standards to Protect Great Crested Newts with eDNA Analysis	Elaine Leach (Fera Science, PTG)
13:40 - 13:55	Validating Methods for Detecting Plant Pests and Pathogens; What's it Worth?	Roy McArthur
13:55 - 14:10	Q&A	All
14:10 - 14:30	Break	Break
14:30 - 14:45	Presenting a Generic Surveillance Method using High Throughput Sequencing	Aimee Fowkes
14:45 - 15:00	Call Yourself a Professional? Building Competency Standards and Capability in Plant Health and Biosecurity	Charles Lane

Continued...

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Continued...

Wednesday 10th November - Using Information and Data for a Sustainable Foodscape

● 15:00 - 15:15	Regulatory Environmental Risk Assessment of Veterinary Medicinal Products	● Chris Sinclair
● 15:15 - 15:30	Q&A	● All
● 15:30 - 15:45	Break	● Break
● 15:45 - 17:00	Round Table Discussion	● Duncan Campbell, John Lever, John Elliot & Sara Walton

Thursday 11th November - Innovation, Collaboration and New Offerings: Perspectives

Session Chair: Damian Malins. Session Moderator: Kat Wotherspoon

● 13:00 - 13:05	Setting the Scene	● Damian Malins
● 13:05 - 13:20	Overview of Plant Clinic	● Don Walker
● 13:20 - 13:35	<i>Xylella fastidiosa</i> Diagnostics	● Jenny Cole / Adam Bryning
● 13:35 - 13:50	Nematodes and the Beautiful Game - <i>Meloidogyne Fallax</i> Outbreaks at Premier League Grounds	● Tom Prior / Valeria Orlando
● 13:50 - 14:05	Detection Technology for Sweet Chestnut Blight (<i>Cryphonectria Parasitica</i>)	● Ashleigh Elliot
● 14:05 - 14:20	Collaboration	● Paula Eves
● 14:20 - 14:35	Vertical Farming Innovation Centre	● William Willats (Newcastle University)
● 14:35 - 14:50	New Tools & Technologies for Ensuring Sustainable Crop Production in vertical Farms	● Avinash Agarwal & Julian Bello-Rodriguez (Newcastle University)
● 14:50 - 15:05	Q&A	● All
● 15:05 - 15:20	Break	● Break
● 15:20 - 15:25	Reimagining and Futureproofing in the Water Industry, and Managing UU's Innovation Lab	● Selwyn Rose, (United Utilities Innovation Strategy Manager)
● 15:25 - 15:30	PhD Research & Spin Outs	● Alex Setchfield (Co-Founder of Insbio)
● 15:30 - 15:35	UK Innovation & Science Seed Fund	● Andy Muir (Investment Director)
● 15:35 - 15:40	FungiAlert	● Angela de Manzanos (CEO & Co-Founder, FungiAlert Ltd)
● 15:40 - 16:40	Discussion Session, Q&A	● Discussion Session, Q&A
● 16:40 - 16:50	Break	● Break
● 16:50 - 17:00	Conference Closing and Student Prize Giving	● Prof. Sir Ian Boyd