

Sustainable Agriculture: Innovations in research and practice

Friday 8 November, 09:30 – 16:30

Herschel Building, Newcastle University

09:30 – 10:00 **Registration with tea and coffee**

10:00 – 10:15 Welcome and introductions

Session 1: Monitoring and management

Chair: Jasper Hubert

10:15 – 10:45 **James Kitson, FERA Science Ltd**

Using molecular diagnostics to discover wild reservoirs and transmission pathways of agricultural diseases

10:45 – 11:00 **Sharon Zytynska, University of Liverpool**

Microbial inoculants for crop protection against insect pests: lab to the field

11:00 – 11:15 **Oakleigh Weekes, University of Sheffield**

Computer vision for pest understanding extracting knowledge on sustainable SWD control methods via 3D free-flight tracking

11:15 – 11:30 **Stewart Rosell, Agri Food and Biosciences Institute (AFBI), Belfast & University of Aberdeen**

Testing eDNA detection methods for plant pests using the Light Brown Apple moth, *Epiphyas postvittana*

11:30 – 11:45 **Yannick Wurm, Pollinatework Ltd & Queen Mary University of London**

Sensibee: Pollinator monitoring for the 21st century

11:45 – 12:00 **Daniel Leybourne, University of Liverpool**

Crop resistance, biological models, and AI-vision: Technologies to support the sustainable management of vectors and disease in agricultural systems

12:00 – 13:00 **Lunch with poster session**

Session 2: Pests and predators

Chair: Kelly Jowett

13:00 – 13:30 **Sam Cook, Rothamsted Research**

How monitoring can improve management for Next generation IPM

13:30 – 13:45 **Tom Roberts-McEwen, University of Portsmouth (online)**

Group-living spiders as biological control agents

13:45 – 14:00 **Duncan Coston, ADAS**

Integrated Pest Management strategies for controlling cabbage stem flea

beetle: Using tramline trials to aid in testing and up-take of sustainable farm management

14:00 – 14:15

Ruchita Tiwari, Indira Gandhi National Tribal University (online)

Foraging behaviour of ladybirds in response to prey species and density

14:15 – 15:00

Coffee break and technology showcase

Session 3: Policy and practice

Chair: Jordan Cuff

15:00 – 15:30

Kirsten Miller, Environment Strategy Directorate, DEFRA

Environmental Monitoring within Defra Group

15:30 – 15:45

Charlie Patel, Loughborough University

Sediment pond contribution to biodiversity and conservation through Agri-Environment Schemes (AES).

15:45 – 16:00

Aislinn Pearson, Rothamsted Research

Open farm data: a complicated reality

16:00 – 16:15

Joana Ferreira, University of Edinburgh & Scotland's Rural College

Bridging the adoption gap: what are farmers' motivations for increasing invertebrate biodiversity in their farms?

16:15 – 16:30

Summary, discussion & close

Poster presentations

Caitlin Willis, Eden Research plc

A terpene based bioinsecticide as a control method against sucking pests

Joe Lyall, University of Manchester

The ecological recovery of macroinvertebrate communities in agricultural sediment ponds to sedimentation events and desilting activities

Paul Allison, Newcastle University

Effects of intermixed trap plants on flea beetle density and herbivory and crop yield in a spring forage Kale crop

Rosy Christopher, Newcastle University

Is timing everything: The implications of temporal factors and crop-type for biocontrol and the trophic interactions of generalist predators

Online posters

Alphonsa Baby, University of Padua

RNAi-mediated gene silencing in *Halyomorpha halys*: Effects on Life History Parameters and Gene Expression

Michael Smith, University of Sheffield

A new method to track how pollinators use agricultural landscapes

Equipment showcases (in-person only)

Basem Attar, Newcastle University

Oxford Nanopore Technologies MinION sequencers

Ben Hawthorne, Newcastle University

Bento Lab and Oxford Nanopore MinION

Broghan Erland, Newcastle University

Drones for Detecting Vegetation Structure and Plant Biodiversity

Zedi Gao, University of Hertfordshire

Olfaction-Based Pest Monitoring: A Genomics-Informed Smart Trap for Flea Beetle Detection