

SWMC Soil22 Building farm resilience - bringing efficiency, nature & farm profitability into harmony

At Harper Adams University and on-line on Wednesday 7th December 2022

Event pricing

In-person attendance only £46 + VAT members, £61 + VAT non-members (includes lunch)

Online only delegate fee £25 + VAT members, £40 + VAT non-members

12-month SWMC membership only £45 + VAT when purchased at the same time as your conference ticket (normally £65 + VAT)

Link to registration page available from early November at <https://soilandwater.org.uk/home/events/>

Conference programme

09.15 Registration opens – hot beverages available

09.50 Introduction – Guy Smith, Essex farmer and past Deputy President, NFU

10.00 Pathways to sustainable agriculture - Chloe MacLaren – Rothamsted Research

10.30 Improving Nutrient Use Efficiency, Andrew Riche – Rothamsted Research

11.00 Umbilical spreading of digestate, Ian Rudge - Agrii / ex. Bedfordia Farms

11.30 Refreshment break

11.50 Improving farm and soil resilience with the Sustainable Farming Incentive (SFI), Philippa Mansfield – Catchment Sensitive Farming, Natural England

12.20 Electrocoagulation, Marie Kirby – Harper Adams University

12.50 Lunch, videos, short tour of the Electrocoagulation plant, posters

14.10 Collaborative research with farmers to test the practicalities and benefits of mixed species cropping, Alison Karley – James Hutton Institute

14.40 Growing clover as a companion crop, Mark Lea, farmer case study – Green Acres Farm

15.00 Regen vs conventional – a systems study, Joe Collins, PhD student – Harper Adams

15.30 Under-storey sowing of crops, Neil Furniss, farmer case study – ME Furniss & Sons

15.50 Panel discussion

16.15 Close

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5 BASIS and 1 NR0SO point have been awarded to this conference

Summaries of presentations

Dr Chloe MacLaren (Rothamsted Research) is a plant ecologist exploring how the interactions between plants and their environments can be used to design sustainable agroecosystems. She will cover the question, “how do we combine different agricultural practices to achieve sustainable systems”? An analysis of 30 long-term experiments in Europe and Africa shows that ecological or regenerative practices are more effective when implemented alongside low rather than high inputs. Getting this combination right can sustain high productivity while reducing environmental impacts.

Andrew Riche (Rothamsted Research) is a crop physiologist, specialising in wheat, particularly wheat nitrogen use efficiency. In the course of his work, he has developed an interest in high throughput phenotyping of field experiments, and particularly in the use of unmanned aerial vehicles for collecting data from field experiments.

Ian Rudge (Agrii Sustainability Trials Manager and former Farm Manager, Bedfordia Farms) will share his experience of management of digestate and slurries in a reduced tillage environment. Neil Furniss (local farmer) will be presenting his experiences of under-storey sowing of crops in maize.

Dr Marie Kirby (Harper Adams University) will be speaking on the subject of the removal of contaminants from Anaerobic Digestation and other wastewater using electrocoagulation, and she will lead a tour to show the installation of this technology at Harper Adams.

Dr Philippa Mansfield (Natural England) will be talking about how improving soil health can save fertiliser and fuel costs and build your farm’s resilience to drought and floods. Farm practices that build organic matter and soil health benefit the environment and the farm business. Philippa will tell us how to get support for improving soil health via the new Soil Standards in the Sustainable Farming Incentive (SFI) scheme.

Dr Alison Karley (James Hutton Institute) will be talking about how mixed species crops (intercrops) can reduce reliance on external inputs and benefit the environment, but will warn of practical challenges. JHI collaborated with farmers to trial intercrops and quantify the agronomic and environmental outcomes, also characterising the practical barriers and solutions for intercrop management. The talk will summarise emerging principles and highlight open access resources for sharing data and knowledge from their research.

Mark Lea, with his wife Liz (Green Acres Farm) run an organic mixed arable and sheep farm that has been farmed organically since 2000 and is certified organic with OF&G. The farm is mostly in a five-year arable rotation including clover-based leys for seed, silage or grazing, wheat, oats and peas. Since ending the compost business and reducing their application of it, it has really made them focus on trying harder with improving all those other aspects of their management which are good for soil. They are continuing to explore ways to reduce heavy cultivations and their carbon impact.

Joe Collins is a PhD student at Harper Adams and is a researcher with experience of working many roles in the farming industry with an MSc focused in Sustainable Crop Production from the University of Warwick and a BSc (Hons) in Agriculture with Crop Management from Harper Adams University. He has been involved with knowledge exchange and dissemination and a soil health and regenerative agriculture event. He has also been a speaker and organiser of farm and crop walk events, practical soil health demonstrations, social media knowledge dissemination and promotion. He formerly worked on a 2250 ha farm of mixed cropping. as a machinery operator using a 32 metre SAM Horizon Sprayer.

Neil Furniss (Caynton House Farm) is a Shropshire farmer who has been awarded a 'green accolade' for his environmental work, which includes exporting enough energy to power his neighbouring 500-home village. Additionally, he has adjusted his cropping to minimise the use of mineral fertilisers and is aiming to make his farm carbon neutral.