

# Wednesday 26<sup>th</sup>

**9:00 am**

## A Commonsense Revolution to Restore our Environment

Allan Savory

9:00am - 10:00am Conference Barn

### LECTURE

Allan Savory will talk about the cause of both global desertification and climate change in which agriculture is playing possibly a greater role than fossil fuel emissions. And he will explain why two new paradigm-shifting concepts are involved in any solution: Management and policy need to be holistic and no longer reductionist and livestock, in greatly increased numbers, are essential to any solution.

## How to check soil health and knowing where to stop

Stephen Bailey & Jackie Stroud

9:00am - 10:00am Soil Tent

### SEMINAR

There is no agreed definition of soil health, but there are many useful indicators of how healthy a soil is. This jointly-presented seminar will go over some of the indicators by Catchment Sensitive Farming (CSF), including not only laboratory tests and identification of deficiencies, but also potential toxicities and essential field assessments. The importance of worms will be emphasized and Jackie Stroud, the country's leading authority on worm assessment in the field, will explain how farmers can do this. Along with this, the Innovation for Agriculture / CSF kitchen science test for soil structural stability will be presented.

There is no definitive list of assessments for soil health, so this seminar will discuss some of the other tests that could be used and how people should decide what to include and where to stop.

Session hosted by Catchment Sensitive Farming who are exhibiting in the Pasture Field A9B.

## The future of no-tillage (understanding the “INVISIBLES”)

John Baker

9:00am - 10:00am Old Dairy

### LECTURE

No-tillage has achieved about 50% of its potential. The remaining 50% will come from understanding three invisible factors. Controlling these invisible factors is the secret to fail-safe no-tillage. Five key functions for no-tillage drills and openers are identified. Few current no-tillage machines perform more than three of these functions. Those that do, produce consistently outstanding crops with few limitations. Understand the science and the rest will follow!

*Please note that due to unforeseen circumstances John Baker will not be able to travel from New Zealand for this session, it will be a live webinar instead.*

## Conversation with UK no-tillers

Tom Martin, Clive Bailye & Humphrey Mills

9:00am - 10:00am Agrigology Discussion Tent

### PANEL

Tom Martin hosts a panel of UK farmers to discuss their experiences of no-till.

**10:00 am**

## First Principles

Joel Williams & Amir Kassam

10:00am - 11:30am Seminar Barn

### FIRST PRINCIPLES

An introductory presentation for those new to conservation agriculture (CA). Amir will present a global overview of CA, why it is

needed, CA principles and systems, adoption and spread globally, and broad benefits at the field and landscape level. This will be followed with a discussion from Joel linking the practices of CA back to the soil and will highlight the how and why CA principles improve and maintain soil health.

## Direct Drill Demonstrations

### Direct Drill Demonstrations – D1 to D4

10:00am - 11:00am Demo Field

### DIRECT DRILL DEMONSTRATION

Watch the Direct Drill Demonstrations, timings as follows:

10:00 – D1 – Cross Slot

10:15 – D2 – Sky Agriculture

10:30 – D3 – Sly Agri

10:45 – D4 – Dale Drills

## Cover crops for soil, water and the environment

Alister Leggat, Rebecca Inman & Paul Brown

10:15am - 10:45am Conference Barn

### SEMINAR WORKSHOP

Session led by Affinity Water, Alister Leggat to chair with Paul Brown (Kings), Rebecca Inman (FWAG East) and a farmer. A discussion to talk about the wider uses of cover cropping and how to maximise these benefits whilst also increasing soil health and improving the water cycle.

## Q&A with Frederic Thomas

Frédéric Thomas

10:15am - 10:45am Agrigology Discussion Tent

### WORKSHOP

Informal Q&A with minimum tillage and Conservation Agriculture specialist, Frédéric Thomas.

**11:00 am**

## Call of the Reedwarbler

Charles Massy

11:00am - 12:00pm Conference Barn

### LECTURE

Charles Massy talks about the enormous promise of regenerative agriculture as expounded in his best-selling book *Call of the Reed Warbler: A New Agriculture – A New Earth*.

The book is full of stories about world-leading innovators who have regenerated their landscapes and farms, their family health and businesses by regenerating the key landscape functions.

The good news is that by creating healthy, biologically diverse, absorbent soils, and by maximising the solar energy function and rejuvenating water cycles and biodiversity, then regenerative agriculture is providing many of the best solutions to our planet's Anthropocene crisis while regenerating human health at the same time via healthy food and fibre.

### Agroforestry – a win win for farming and the environment

**Stephen Briggs, Tom Staton & Helen Chesshire**

11.00am - 12.00pm Soil Tent

#### SEMINAR

Find out how agroforestry can improve the sustainability of your business whilst delivering an array of public goods.

### Does Britain need a Food Policy?

**Sue Pritchard, Henry Dimbleby & Rosie Boycott**

11.00am - 12.00pm Old Dairy

#### INTERVIEW

Henry Dimbleby (Commissioned to write a food policy by the Secretary of State) and Sue Pritchard (Director of the RSA commissioned, wide-ranging report into Food and Farming) in conversation with Rosie Boycott.

### New Ag Connected Weather Station

**Victoria Nicol**

11:00am - 11:30am Pasture Field

#### WORKSHOP

This session takes place on the Sencrop stand (Pasture Field A3). Sencrop is offering an integrated platform for farmers to view live weather at specific sites instantly. The talk will include a demonstration of the

weather station along with an overview of the application and its features. An opportunity for farmers to have an on farm demonstration will be available too.

### Bringing in the Good Guys: IPM in Practice

**Charlotte Rowley, Katie Bliss & Alice Midmer**

11.00am - 12.00pm Old Dairy

#### WORKSHOP

It's the word on the street – but what does integrated pest management really mean in the field?! Come along to this informal session around the strawbales where we will talk to researchers and farmers about building a farm system that is more resilient to pests. How to identify pests and their enemies, and attract them into the field.

## 12:00 pm

### Silvopasture Design Workshop

**Russ Carrington, Jo Smith, Paul Woodgate & John Cherry**

12:00pm - 1:00pm Soil Tent

#### WORKSHOP

Practical design workshop for establishing silvopasture – planting trees for shade, shelter and browsing – how to do it and why.

### Direct Drill Demonstrations

#### Direct Drill Demonstrations – D5 to D8

12:00pm - 1:00pm Demo Field

#### DIRECT DRILL DEMONSTRATION

Watch the Direct Drill Demonstrations, timings as follows:

12:00 – D5 – Weaving

12:15 – D6 – Simtech Aitchison

12:30 – D7 – P Tuckwell / John Deere

12:45 – D8 – Horsch

### Rebuilding and Maintaining Life in the Soil

**Jay Fuhrer**

12:00pm - 1:00pm Seminar Barn

#### FIRST PRINCIPLES LECTURE

Rebuilding and maintaining life in the soil is directly linked to the longevity and reliability of our future agriculture. Plants, animals, and soils evolved together over geological time. Consequently, the cropping and grazing systems we are using today are not the systems which originally built our soils.

Landscape simplification has been ongoing for generations fuelled by loss of perennials and animal impact, combined with soil disturbance, residue removal, and monoculture crop production without cover crops. Symptoms of landscape simplification are evident and include reduced soil organic matter and infiltration, wind erosion, water erosion, salinity, water quality impacts, and high fossil fuel inputs.

### Groundswell Benchmarking Results

**Gary Markham**

12:15pm - 12:45pm Conference Barn

#### LECTURE

Gary Markham (LFB) presents the second year's Groundswell Financial Benchmarking Results, from a cohort of no-till compared to 'conventional' farmers.

### Getting Out of the Commodity Trap - New Markets for Sustainable Arable

**Fred Price, Katie Bliss & Steven Jacobs**

12:15pm - 12:45pm Conference Barn

#### WORKSHOP

One of the barriers to moving towards more sustainable arable systems is finding a market for smaller volumes of diverse crops. In response to this there is a growing number of farmers who are finding alternative markets for cereals and pulses which support them to farm agroecologically. Come along and talk to them around the strawbales about how they are making it work and explore how it could work on your farm too!

### KWS Variety Trial Discussion

**John Miles**

12:30 pm - 1:00 pm KWS Trial Area

#### WORKSHOP

KWS will be discussing the details around variety choices in modern farming. With a back drop of farm drilled variety strips, we want to learn what variety/traits/characteristics farmers value highest in an established no till and a no till conversion environment. We will be holding a poll so make sure you get your voting card/token from the KWS stand in the main area.

This session takes place on the KWS Variety Trial Satellite stand which is at the end of the Pasture Field.

## 1:00 pm

### Glyphosate Debate

**William Scale, Amir Kassam, John Landers & Frédéric Thomas**

1:00pm - 2:00pm Conference Barn

#### PANEL

John Landers, Frédéric Thomas, Amir Kassam and Will Scale will be considering the implications of the current media storm about Glyphosate, and the positive or negative effects that a ban on the chemical would have on UK agriculture and the environment, and no-till farming in particular.

### The Future is now for Biology to replace/supplement chemical fertilizers and pesticides

**Christopher Hook**

1:00pm - 1:30pm Old Dairy

#### SEMINAR

Chris will focus on his practical experience working with two highly sophisticated bio-fertilizer / soil inoculant products, in a range of soil types, and growing conditions – in more than 10 countries worldwide – successes and failures – and why the failures, as most can be explained. He will advise farmers what to look for in a product they propose to use, how to look after the live micro organisms, apply them, and also what to expect by way of crop yield and improvement to soil structure and financial gain.

### Allan Savory Book Signing at 3LM Stand

**Allan Savory**

1:00pm - 1:30pm Seminar Barn

#### BOOK SIGNING

### Become a Soil Expert for Your Farm

**Abby Rose, Ian Boyd, Annie Landless, Chris Leach, Fred Price & Fidelity Weston**

1:00pm - 2:00pm Agrigology Discussion Tent

#### SEMINAR

Hear from farmers Chris, Fred, Fidelity and Ian who are all using soil health as a guide as they experiment and discover what works best for their farm. They have been using simple soil tests combined with the Sectormentor for Soils app to learn and assess how healthy their soil is. Whether you want to see how effective herbal leys are, understand if a different grazing strategy is working or just simply reduce your inputs, in this session you will hear how farmers are using soil as their guide as they try a more regenerative approach to their farm. Following the session we will head outside and Annie Landless will demonstrate some of the soil tests, showing how you can easily do them yourself.

### Compost Turning Demonstration

**Ollie Martin**

1:00pm - 1:30pm Demo Field

#### DEMONSTRATION

New at Groundswell this year in the demo field will be the compost turning demonstration. The aim of the process is to take a standard heap of farm yard manure and increase its worth by creating an environment in which beneficial biology, such as aerobic bacteria, fungi and protozoa can thrive. These micro-organisms then break down the organic matter in the manure creating a biologically active compost. When spread onto the field this not only acts as an organic manure, but also as a biological inoculant for the soil. Numerous components can be added to the mix, including wood chip or straw, with the aim of achieving a Carbon to Nitrogen ratio of approximately 25:1. Clay topsoil may also be added to provide additional nutrient binding sites. Ideally a temperature of between 50 and 70°C should be maintained by regular turning to provide the optimum environment for the beneficial microbes.

### Introduction of livestock into the arable rotation

**Tom Heathcote**

1:30 - 2:00pm Old Dairy

#### WORKSHOP

Arable farms operate in a volatile market place with limited influence over their input costs and their output is globally commodity subject to unpredictable fluctuations and external influences. With plateauing yields, cost control is key to maintaining profit margins and many farmers are now looking to other methods of land management to help improve soil health, reduce their reliance on artificial inputs and increase farm margins.

The introduction of livestock into an arable rotation has multiple advantages including improving soil health, building natural fertility, weed control and additional sources of income and it can be achieved in a de-risked way with low capital expenditure.

### Kings Cover Crop Plot Tour

**Paul Brown**

1:30 - 2:00pm Demo Field

#### WORKSHOP

Join Paul Brown at the Kings Cover Crop Trial Plot in the middle of the Demo Field to see 20 different variety mixes of cover crops.

## 2:00 pm

### Rainfall Simulator Demonstration

**Jay Fuhrer**

2:00pm - 2:30pm Conference Barn

#### DEMONSTRATION

See the dramatic effect of two inches of rainfall on soils under different management regimes: no-till and cultivated, with and without cover and under permanent pasture.

### Direct Drill Demonstrations

**Direct Drill Demonstrations – D9 to D-1**

2:00pm - 3:00pm Demo Field

#### DIRECT DRILL DEMONSTRATION

Watch the Direct Drill Demonstrations, timings as follows:

14:00 – D9 – Kuhn

14:15 – D10 – Novag

14:30 – D0 – Sam Agri / Virkar

14:45 – D-1 – Ryetec

## Carbon Loss? How to increase organic matter content in the soils

Jan Feersma Hoekstra

2:00pm - 3:00pm Pasture Field

WORKSHOP

Session held on the Agriton Bokashi stand.

## Weeds surgery – non-chemical weed control

Nicola Cannon & Katie Bliss

2:15pm - 2:45pm Agricology Discussion Tent

WORKSHOP

With a reduction in the efficacy and availability of many herbicides, agroecological approaches to managing weeds are becoming increasingly popular. This is an opportunity to share practical experiences and ideas with non-chemical weed management and ask questions about specific weed management to the experts.

## 3:00 pm

### Different approaches to weed management with CA

Frédéric Thomas

3:00pm - 4:00pm Conference Barn

LECTURE

Weed management has been one of the most difficult tasks for arable farmers. Even if ploughing and tillage is often put forward, no-till and more widely Conservation Agriculture has brought a complete set of new approaches and options in order to reduce quite drastically weeds, save on cost of establishment and profit of better organised soil structure. During this hour we will go from seed bank management, impact of no tillage as well as cover-crops, rotation and fertility set up. We will also address the connection with animal production. The idea is to leave you with the maximum options in order to keep your weeds guessing!

## CA Principles into Practice in the UK

William Scale & Simon Cowell

3:00pm - 4:00pm Seminar Barn

FIRST PRINCIPLES SEMINAR

Will Scale, Simon Cowell and Ian Piggott will describe the process of transition to CA on three farms in the UK.

## Can we farm without insecticides?

Martin Lines

3:00pm - 4:00pm Agricology Discussion Tent

SEMINAR

Cutting Pesticide Use to Help Wildlife?. Pesticide use is a key factor behind wildlife decline. The UK is committed to prioritising Integrated Pest Management for pest and disease control, but consultation with farmers reveals why this isn't happening in practice. What support do farmers need to switch to non-chemical methods? How can individual farmers make a difference?

Discussion chaired by Martin Lines, UK Chair Nature Friendly Farming Network, with Lincolnshire arable farmer Peter Lundgren, NFFN England Steering Group member David Lord, and Friends of the Earth Campaigner Nick Rau

## The Ambitious Farmer : How will you make your farm's future bigger than its past?

Sam Watson Jones

3:00pm - 4:00pm Old Dairy

SEMINAR

The world of farming is changing. The role of the farmer, how we think about our farms and how we think about ourselves will need to adapt to a new world of Digital Farming. The challenge for farmers is to get really clear on their purpose and their goals, questions that we rarely ask ourselves. What are your ambitions for your farm? What are your ambitions for yourself? With the right mindsets, we can design a working life which supports your purpose as an individual. We will map out the Eight Mindsets that we believe the most successful farmers of the future will adopt. Come and find out your strengths – and start creating a plan which guarantees that your most exciting and successful days are

yet to come. This session is hosted by Small Robot Company who can be found exhibiting in the Old Dairy.

## AHDB Soil Pit Interactive Workshop

Dr Anne Bhogal & John Elphinstone

3:00pm - 4:00pm Soil Pit

WORKSHOP

Visit the Soil Pit in the Demo Field to join this interactive workshop with AHDB. Look at rooting, soil structure and soil biology in the soil pit with Anne Bhogal, ADAS and John Elphinstone, Fera. Discuss the soil sampling results from the Groundswell fields, conducted to the AHDB's new soil health scorecard method. Hear about the latest levy funded research on soils from AHDB soils specialists and ask your questions to the team.

## Fixing the Food Supply Chain

Ben Pugh

3:30pm - 4:00pm Old Dairy

SEMINAR

Ben Pugh describes how he disrupted the food supply chain with his innovative Farm-Drop supply business.

## 4:00 pm

### Herbal Ley Workshop with Cotswold Seeds

Sam Lane

4:00pm - 4:30pm Demo Field

WORKSHOP

Session held at the Cotswold Seeds stand in the Demo Field. Complex seed mixtures and the benefits they bring to animal health, soil fertility and farm profitability are at the heart of much of Sam Lane's work as Technical Manager at Cotswold Seeds. A family business based in Moreton-in-Marsh, Cotswold Seeds has built its reputation on developing forage, herbal leys, green manures and complex seed mixtures as well as providing advice to customers, which now number 15,000 farmers and landowners across the UK.

## Agroforestry – your questions answered!

## Agroforestry – your questions answered!

**Helen Cheshire & Jo Smith**

4:15pm - 4:45pm Agrigology Discussion Tent

### WORKSHOP

Thinking about agroforestry on your farm? Come along to this informal session around the strawbales to ask questions and get guidance from the researchers and farmers making it work on arable and livestock systems.

Jo Smith, ORC; Helen Cheshire, Woodland Trust, Stuart Holm, Woodland Trust 4:30pm - 5:00pm Demo Field

## Moving the Mob - Mob Grazing Demo

**John Cherry**

4:30pm - 5:00pm Demo Field

### DEMONSTRATION

John Cherry (Host farmer) will be demonstrating moving the mob on the herbal ley. He'll be answering questions and he will be repeating this on Thursday at 5.00pm.

## 5:00 pm

### Farmer Perspectives: Reducing N

**Joel Williams, Andrew Howard, Timothy Parton & Doug Christie**

5:00pm - 6:00pm Conference Barn

### PANEL

Artificial nitrogen has transformed agricultural production arguably like no other input, yet excess quantities of this highly reactive nutrient also cause a host of negative environmental impacts. With typical NUEs of ~50% the norm, there is scope to improve efficiencies and reduce dependency on bagged N. This session will share a selection of on-farm strategies being implemented by UK [and IE] farmers and via a discussion panel, will explore a selection of case studies in detail. Bring your smartphones [on silent] to participate in an audience poll.

## Integrated Systems Approach Farming

**Mike Harrington**

5:00pm - 6:00pm Seminar Barn

### SEMINAR

Mike has been advising farmers for over 30 years. He initially trained as a chemical specialist, however soon realised that the problems with chemical fertilisers and the increasing resistance to herbicides, fungicides and insecticides would not be solved with current methods. In 2005 he founded Edaphos Ltd, an agronomy firm specialising in managing soil and soil biology. Working in partnership with farmers the company looks to develop processes and systems more in tune with the environment and nature, making the soil and life within the soil the natural driver rather than products as a short-term solution.

Changing your model of agriculture requires a substantial change in mindset and to reduce inputs the farm must develop an integrated system that requires a very different approach to farming.

### Direct Drill Discussion

**Ollie Martin**

5:00pm - 6:00pm Soil Tent

### PANEL

Ollie Martin moderates a discussion between the first six drill manufacturers: Cross Slot, Sly, Simtech Aitchison, Kuhn, Sky, Sam Agri (Virkar)

## Grazing Infrastructure – “Keeping the B\*\*\*\*\*s in”

**James Daniel**

5:00pm - 5:25pm Agrigology Discussion Tent

### WORKSHOP

Principles of electric fencing and portable water system design and set-up for livestock.

## Why Farming with the Environment is the way Forward

**Martin Lines**

5:00pm - 5.30pm Old Dairy

### WORKSHOP

Martin Lines UK Chair Nature Friendly Farming Network explains what is the Nature Friendly Farming Network and why farming with nature is the most productive and profitable way to farm.

## Integrating sheep into the arable rotation

**Rob Hodgkins**

5:30pm - 6:00pm Agrigology Discussion Tent

### WORKSHOP

## Forum to refine the Elterwater Challenge

**John Landers**

5:30pm - 6:00pm Agrigology Discussion Tent

### WORKSHOP

## WOX Machinery Demo

5:30pm - 6:00pm Demo Field

### DEMONSTRATION

## 6:00 pm

### Pasture Fed Open Spit Roast BBQ

6:00pm - 7:30pm - Earthworm Arms

### FOOD

A collaboration between Richard Wedlake and Luppo (Straight Line Nutrition), join the evening bbq of pasture fed beef at The Earthworm Arms. Pasture-Fed meat supplied by Boyd Farms Cotswold Beef and Deerbrook Farm Butchery and Farm Shop.

## 7:00 pm

### Courage to Change

**Sam Watson Jones & Ruby Wax**

7:00pm - 8:00pm Conference Barn

### WORKSHOP

Ruby Wax in conversation with Sam Watson Jones, guided by Joanna Cherry.

# Thursday 27<sup>th</sup>

9:00 am

## The Importance of Managing Holistically

Allan Savory

9:00am - 10:00am Conference Barn

### LECTURE

Allan Savory's Day Two session. Allan will explain why managing agriculture holistically is imperative, and why livestock – properly managed – are essential to regenerative agriculture globally. Based on experience gained on continents with harsher environments and economies, he will share ideas that can help UK farmers thrive. There will be ample time for questions and answers.

## Conversation with UK no-tillers

Ian Piggott, Clive Bailie & Simon Cowell

9:00am - 10:00am Seminar Barn

### PANEL

Ian Piggott in conversation with UK no-tillers.

## Measuring and optimising soil management using the soil health scorecard and molecular approaches

John Elphinstone & Dr Anne Bhogal

9:00am - 10:00am Soil Tent

### SEMINAR

AHDB' Soil Biology and Soil Health Partnership is a five year, cross-sector programme of research and knowledge exchange to help farmers and growers improve productivity through better understanding of soils.

Two key parts of this programme will be highlighted during this talk – the first is the development of a soil health scorecard for farmers and growers to be able to measure and interpret their soils. The second, an evaluation of DNA-based analysis to look at

the potential for their use for soil analysis in the future – fascinating new technology!

Anne Bhogal will look at the development of the soil health scorecard, the key parameters that are being discussed and analysed, the use of grower groups and long-term experimental site data to develop and ground-truth the benchmarks and to showcase the development of the scorecard for farmer and grower use.

John Elphinstone will share the development work of the use of molecular approaches for routine soil-borne disease and soil health assessment. Could this DNA analysis be the future of soil sampling and assessment for the industry?

## Why no-till? A soil biota perspective

Simon Jeffery

9:00am - 10:00am Agronomy Discussion Tent

### SEMINAR

Introduction to soil biology and a report on some of the experimental data from the Conservation Agriculture projects that Simon is involved in.

## How regenerating soil health can improve farm profitability from year one

Nicholas Verschuere

9:00am - 9:30am Old Dairy

### SEMINAR

Soil Capital is a farm management firm committed to scaling regenerative agriculture through market solutions. Our team of agronomists and finance professionals is united by the conviction that soil health is the single most important driver in increasing farm productivity, reducing risk and protecting profitability.

Over recent years, we have had the privilege to execute strategies to transition some 30 farms across 15 countries to regenerative production practices, advising on many more. In almost all cases, we have improved farm profitability from the first year. Here, I

will share some key insights from our experience, illustrated with practical examples.

## Carbon Sinks – Get planting and generate productive profitable soils

Jonathan Holmes

9:30am - 10:00am Old Dairy

### SEMINAR

Understand how a plant interacts with soil and increase your gross margin while saving the planet!

Albrecht soil science quantifies your soil's potential for productivity. Use that information to increase plant health while reducing fertiliser and fungicide costs.

Productive soils will generate a healthy plant that has the capacity to sequester carbon – extract atmospheric carbon dioxide and allow the soil-borne mycorrhizae to store it in the soil as calcium carbonate

This session is hosted by Jonathan Holmes (Lordington Park Agronomy).

10:00 am

## Direct Drill Demonstrations

### Direct Drill Demonstrations – D10 to D7

10:00am - 11:00am Demo Field

### DIRECT DRILL DEMONSTRATION

Follow the Drill Demonstrations, timings as follows:

10:00 – D10 – Novag

10:15 – D9 – Kuhn

10:30 – D8 – Horsch

10:45 – D7 – Sly Agri

## What Soil Can Tell You? – Savory Hub Breakout

Sheila Cooke & Christopher Cooke

10:05am - 11:00am Seminar Barn

### WORKSHOP

When you start making changes in favour of healthy soil, how do you know if things are moving in the right direction? Do you have to wait a whole season before you find out if you made the right decisions?

When we make changes in our management, the earliest signs of change occur at the soil surface. Monitoring for signs of change at the soil surface gives the best chance of spotting positive or negative variances early, before it's too late.

Sharpen your capacity to manage for soil regeneration by attending this one-hour session that will enable you to read the language of the land.

We will look at the soil through four different lenses: the water cycle, the mineral cycle, the flow of solar energy, and community dynamics (the dynamics of how things change in plant and animal communities.)

Take away a survey you can use to assess the health of your land.

### Low input sheep production and saifoin

**Richard Smith & Tim Field**

10:15am - 10.45pm Agricolgy Discussion Tent

#### WORKSHOP

Looking to integrate sheep into your farming system? Already got sheep but want to enhance their benefit in your rotation? Want to learn more about sainfoin? Richard Smith is the Farm Manager at Daylesford Farm in Gloucestershire where they have five breeds of sheep roaming the pastures including rare breed Cotswolds and Kerry Hill. He is passionate about the role of genetics and sainfoin in creating low input systems based on agroecology. Come along to chat with Richard around the straw bales and ask your questions!

### Interview with Minister Robert Goodwill

**Robert Goodwill & Rosie Boycott**

10:15 - 11:00am Conference Barn

#### INTERVIEW

Rosie Boycott interviews Robert Goodwill, Agriculture, Fisheries & Food Minister at DEFRA.

**11:00 am**

### Innovative Farmers – Improving soil health through farmer-led research

**Liz Bowles, David White & Rob Saunders**

11:00am - 12:00pm Agricolgy Discussion Tent

#### PANEL

Farmers often innovate and experiment in isolation. Only 1% of research money is currently going towards farmer-led agricultural projects, with much of the rest going to top down research which often tries to parachute products onto farmers, increasing the input bill. Innovative Farmers is trying to change this. Matching the ideas and expertise of farmers with those of researchers, can fast forward agricultural innovation, making farms sustainable and resilient. Innovation around soil health is a key part of our work. Join us to hear from a panel of pioneer farmers at the heart of this new wave of grassroots research.

### Carbon, Crops and Covers

**Jay Fuhrer**

11:00am - 12:00pm Seminar Barn

#### LECTURE

Managing carbon begins with the understanding of the carbon cycle and how it relates to cropping systems, grazing systems, orchards, gardens, etc. How does carbon enter the soil and how does it leave? What is the process for carbon in the surface residue and the root mass? What role can livestock play?

Soil regeneration requires the constant building and rebuilding of soil aggregates, a foundation building block of soil function. As carbon levels increase, the soil food web increases, and now has the ability to build more soil aggregates and move carbon into the soil organic matter.

### Zero Tillage (CA) in Ley Farming

**John Landers**

11:00am - 12:00pm Soil Tent

#### LECTURE

Crop/livestock rotations in Peru go back three thousand years to before the Incas and the Romans practiced fallows in between grain cops. But the application of Zero Tillage (ZT) to crop/livestock rotations effectively only took effect after the introduction of Glyphosate, ca. 1980. The Brazilians and later Australians and Americans applied ZT to ley farming. The literature rarely distinguishes ZT in ley farming. Today, the Brazilian and Australian literature are the most complete. The most important synergies are : (i) improved soil

structure and organic matter, (ii) higher nutrient use efficiency, (iii) suppression of pests and diseases, (iv) higher yields in crops and animals and hence, (v) a better bottom line. The Australians and New Zealanders took longer than the N. & S. Americans to embrace ZT but were well ahead in tropical and sub-tropical ley farming.

### Microbes and Minerals

**Jennifer Brodie & Glyn Mitchell**

11:00am - 11.30am Old Dairy

#### SEMINAR

Forget high tech equipment, expensive fertilisers and specialist seed selection. On a back to basics approach Jennifer and Glyn are convinced we are missing a trick for our soil. Jennifer outlines her 15 years' of adding UK's own ancient MINERAL (full suite of 17) rich freshly crushed, finely screened volcanic rock dust to soil. Glyn compliments this by explaining what is achieved by culturing soil MICROBES in the right compost, extracting the beneficial ones and deploying them to protect crops from pests and disease while reducing cost. Simplest is best – as crop yield and health is increased, so is carbon sequestration. A talk not to be missed! Session hosted by REMIN and Credible Food Project.

### Improved Crop Production through Interaction of Beneficial Soil Microbes

**Natallia Gulbis**

11:00am - 12:00pm Pasture Field

#### WORKSHOP

Session held on the Plantworks Stand (Pasture Field B11)

### How to Beat the Supermarkets

**William Kendall**

11:15am - 12:00pm Conference Barn

#### LECTURE

William Kendall talks about how to Beat the Supermarkets.

**The Food Waste Farmer****Igor Vaintraub**

11:45am - 12:00pm Old Dairy

**WORKSHOP**

All-in-one solution to transform renewables into nature based soil management system.

**12:00 pm****Rainfall Simulator Demonstration****Jay Fuhrer**

12:00pm - 12:30pm Conference Barn

**DEMONSTRATION**

See the dramatic effect of two inches of rainfall on soils under different management regimes: no-till and cultivated, with and without cover and permanent pasture. Hosted by Jay Fuhrer.

**Harvesting ideas for soil health innovation****Liz Bowles**

12:00pm - 1:00pm Agronomy Discussion Tent

**WORKSHOP**

Peer to peer learning is key to collaborating on soil health. Join us for an interactive session to crowdsource ideas for agricultural research with farmers setting the priorities. We'll have farmers fresh out of their field labs to sound board ideas with, and a smattering of researchers to amplify the learning. Everyone who joins this session should go home with a good idea of how to set up their own field lab. Session led by Innovative Farmers.

**Direct Drill Demonstrations****Direct Drill Demonstrations D6 to D-1**

12:00pm - 2:00pm Demo Field

**DIRECT DRILL DEMONSTRATION**

Follow the Drill Demonstrations, timings as follows:

12:00 – D6 – Simtech Aitchison

12:15 – D5 – Weaving

12:30 – D4 – Dale Drills

12:45 – D3 – P Tuckwell / John Deere

13:00 – D2 – Sky

13:15 – D1 – Cross Slot

13:30 – D0 – Sam Agri / Virkar

13:45 – D-1 – Ryetec

**Routes to Markets****Nick Barnard, William Kendall & Rosie Boycott**

12:30pm - 1:30pm Conference Barn

**PANEL**

William Kendall, (Cawston Press, Covent Garden Soup), Nick Barnard (Rude Health) and Corrisande Graham (a farmer selling directly to butchers and restaurants) on ways to establish new markets. Rosie Boycott will chair the discussion.

**KWS Variety Trial Discussion (on KWS Satellite Stand)****John Miles**

12:30pm - 1:00pm KWS Trial Area

**WORKSHOP**

KWS will be discussing the details around variety choices in modern farming. With a back drop of farm drilled variety strips we want to learn what variety traits/ characteristics farmers value highest in an established no till and a no till conversion environment. We will be holding a poll so make sure you get your voting card/ token from the KWS stand in the main area.

This session takes place on the KWS Variety Trial Satellite stand which is at the end of the Pasture Field.

**1:00 pm****Building diversity and soil health for sustainable cropping systems****Adrian Newton**

1:15pm - 1:45pm Agronomy Discussion Tent

**SEMINAR**

This talk will give an overview of research at the James Hutton Institute and in an EU project DIVERSify to develop innovative cropping approaches for agricultural sustainability. It will report research to improve overall biodiversity (e.g. intercropping, variety mixtures, management of non-crop components) and soil cultivation (e.g. direct drilling, reduced chemical inputs) and assess their impacts on crop productivity and disease management. It will summarise the utility of these

approaches and how they could be integrated to improve the sustainability and resilience of the cropping system.

See more about the Horizon2020 'DIVERSify' project: [www.plant-teams.eu](http://www.plant-teams.eu)

**Innovative soil and water health testing for increased agricultural productivity****Rob Stichbury**

1:30pm - 1:55pm Pasture Field

**WORKSHOP**

The talk will be centred around soil-health testing and how understanding the soil biology can influence key agricultural decisions for increased agricultural productivity. There will be case studies and examples of the applications of the technology. This Session takes place on the Fungi Alert Stand Pasture Field D10.

**2:00 pm****Allan Savory in conversation with Charles Massy****Allan Savory, Charles Massy & Tim Hay**

2:00pm - 3:00pm Conference Barn

**INTERVIEW**

Session chaired by Tim May.

**Rewilding at Knepp****Isabella Tree & Sir Charles Burrell**

2:00pm - 3:00pm Seminar Barn

**SEMINAR**

Isabella Tree and Charlie Burrell tell the story of how they transformed their farm with this extraordinary project.

**Nitrogen Sharing from Legume Companions****Joel Williams**

2:00pm - 3:00pm Soil Tent

**LECTURE**

Although we predominantly consider the decay of root nodules and legume tissues as the main mode of delivery of N from legumes to the following crop, legume companions can also share N in real time to the current crop. This session will outline

the pathways for below ground transfer of N, give insight into the biotic and abiotic factors that influence this interaction and provide agronomic tips on how to optimise this process in field.

## Whole Farm Planning for Regenerative Agriculture

Niels Corfield

2:00pm - 3:00pm Agricolgy Discussion Tent

### SEMINAR

Design principles and practices for regenerative farms, including:

1. Managing hedges for maximum benefit/function
2. Agroforestry & trees – increasing structural diversity on farm
3. Providing shelter & shade – windbreaks, snow fences
4. Silvopasture design for improved animal performance & browse
5. Designing water & power distribution for intensive grazing operations
6. Fencing & access solutions for low maintenance/low stress animal handling
7. Time-saving strategies for management of land & livestock
8. Eliminating redundant infrastructure & capital expenditures on-farm
9. No-turn strategies for composting manures, bedding & other biomass

## Amino-acid based Biostimulants and their role in broadacre agriculture

Richard Phillips

2:00pm - 2:30pm Old Dairy

### SEMINAR

Amino acids, what they do, where they come from, how to use them in broadacre agriculture.

## Compost Turning Demonstration

Ollie Martin

2:00pm - 2:30pm Demo Field

### DEMONSTRATION

New at Groundswell this year, the compost turning demonstration will be in the demo field. The aim of the process is to take a

standard heap of farm yard manure and increase its worth by creating an environment in which beneficial biology, such as aerobic bacteria, fungi and protozoa can thrive. These micro-organisms then break down the organic matter in the manure creating a biologically active compost. When spread onto the field this not only acts as an organic manure, but also as a biological inoculant for the soil. Numerous components can be added to the mix, including wood chip or straw, with the aim of achieving a Carbon to Nitrogen ratio of approximately 25:1. Clay topsoil may also be added to provide additional nutrient binding sites. Ideally a temperature of between 50 and 70°C should be maintained by regular turning to provide the optimum environment for the beneficial microbes.

## Linking soil health to output

Ian Robertson

2:30pm - 3:00pm Old Dairy

### SEMINAR

The discussion is about looking at detailed soil chemical tests, organic matter and active carbon tests (indication of microbial activity) and how these 3 parameters influence soil nutrient cycling. Working through on farm experience of linking these to biomass measurements to meet peak demand of cereal crops. More soil life can mean more yield however you still have to have access to enough key nutrients to build the biomass.

## Kings Cover Crop Plot Tour

Paul Brown

2:30pm - 3:00pm Demo Field

### WORKSHOP

Join Paul Brown at the Kings Cover Crop Trial Plot in the middle of the Demo Field to see 20 different variety mixes of cover crops.

## 3:00 pm

### How to engage with consumers

Cathy Boyd, Laura Chapman & Stefano Cuomo

3:00pm - 4:00pm Agricolgy Discussion Tent

### MARKETING PANEL

Exploring supply chains and marketing options and know-how for farmers selling in to butchers, consumers and retailers. Session hosted by the PFLA

## Book Signing

3:00pm - 4:00pm Agricolgy Discussion Tent

### BOOK SIGNING

Signed by the Author- Allan Savory, Charles Massy, Isobella Tree... Visit the Bookstand in the Old Dairy

## AHDB Soil Pit Interactive Workshop

Dr Anne Bhogal & John Elphinstone

3:00pm - 4:00pm Soil Pit

### WORKSHOP

Visit the Soil Pit in the Demo Field to join this interactive workshop with AHDB. Look at rooting, soil structure and soil biology in the soil pit with Anne Bhogal, ADAS and John Elphinstone, Fera. Discuss the soil sampling results from the Groundswell fields, conducted to the AHDB's new soil health scorecard method. Hear about the latest levy funded research on soils from AHDB soils specialists and ask your questions to the team.

## Soil Compaction Trial Results and Analysis

David Purdy

3:00pm - 4:00pm Pasture Field

### WORKSHOP

David Purdy presents the findings from the Michelin-Groundswell Compaction Trial, looking at the impact of compaction, tyres, axle weights and pressures etc. with a reference to soil health.

The machinery/soil interface is critically important and if managed poorly can have huge and long-term damaging effects on our soils and plant health. Developing the organic content of our soils is the most important thing we can do to become more resilient to the damage done by ever-increasing size and weight of machinery; however, management of machinery remains very critical. Compaction can be very detrimental to our soil functions and so needs to be carefully managed. The soil compaction presentation and demonstration area at Groundswell,

sponsored by Michelin, will show how these decisions can impact soil health and the physical aspects of soils including infiltration rates, soil resistance through the profile, pressure impacts at depth, rut depths, structure and tyre contact areas.

**Low cost, open-data & DIY approaches to assessing the public goods provided by your land**

**Shaun Dowman, Sophia Burke & Mark Mulligan**

3:15pm - 3:45pm Conference Barn

**WORKSHOP**

Affinity Water hosted session with Sophia Burke and Mark Mulligan. Practical workshop to highlight how to make your own weather stations and soil sensors to provide you with real-time field data.

**4:00 pm**

**Soil Farmer of the Year**

**Simon Cowell & Joel Williams**

4:00pm - 5:00pm Conference Barn

**PANEL**

Session led by Joel Williams, interviewing Simon Cowell (winner 2018) and presenting the awards for Soil Farmer of the Year 2019. In association with Farm Carbon Cutting Toolkit.

**Call of the Reed Warbler**

**Charles Massy**

4:00pm - 5:00pm Seminar Barn

**LECTURE**

Charles Massy talks about the enormous promise of regenerative agriculture as expounded in his best-selling book *Call of the Reed Warbler: A New Agriculture – A New Earth*.

The book is full of stories about world-leading innovators who have regenerated their landscapes and farms, their family health and businesses by regenerating the key landscape functions.

The good news is that by creating healthy, biologically diverse, absorbent soils, and by maximising the solar energy function and rejuvenating water cycles and biodiversity, then regenerative agriculture is providing many of the best solutions to our planet's

Anthropocene crisis while regenerating human health at the same time via healthy food and fibre

**Direct Drill Discussion**

**Ollie Martin**

4:00pm - 5:00pm Soil Tent

**PANEL**

Ollie Martin moderates a discussion between the second batch of six drill manufacturers: Novag, Weaving, Dale, Horsch, Ryetec and John Deere

**The Soil/Gut Connection**

**Nick Barnard, Dr Natasha Campbell-McBride & Rosie Boycott**

4:00pm - 5:00pm Old Dairy

**PANEL**

A panel looking at the connection between soil health and human health – what we eat and how we feel. Panellists: Natasha Cambell-McBride and Nick Barnard. Chaired by Rosie Boycott

**WOX Machinery Demo**

4:00pm - 4:30pm Demo Field

**DEMONSTRATION**

**Cover crops: what have we learned about what works?**

**Alastair Leake**

4:15pm - 4:45pm Agriculogy Discussion Tent

**WORKSHOP**

A few years down the line with experimenting with cover crops and herbal leys. What have we learned about what works and what doesn't in different soil types and farming systems? Are we trying to do everything with cover crops, and could they work better as part of an integrated solution? Could herbal leys in stewardship options be grazed or mulched in a stockless system and provide similar functions on heavier soils? Could we then be drilling straight into them? Join Agriculogy for an informal discussion around the straw bales to share ideas, questions and practical experiences.

**5:00 pm**

**Moving the Mob - Mob Grazing Demo**

**John Cherry**

5:00pm - 5:30pm Demo Field

**DEMONSTRATION**

At the end of the Conference join John Cherry (host farmer) in the Demo Field to witness the moving of the mob on the herbal ley.

**Why talk about food at Groundswell?**

Many farmers are dispirited by the current market-model in this country whereby wheat is mainly grown for feeding animals who could be eating grass whilst consumers are buying increasingly varied ingredients (spelt, lentils, rye) which are mostly grown abroad.

So this year we are launching a 'Food for Thought' thread: we want to address this disconnect between the food we grow and those who sell and eat it. We live in an age of dietary revolution, with more books being sold on how and what to eat than on any other subject, so, to join together the growers with the eaters, we have created panels of policy makers, nutritionists, growers, and market innovators to start important conversations about the future of feeding the nation.