



# 10th Organic Producers' Conference

27-28 January 2016

## Common ground

Agroecology, food sovereignty and organic farming in practice

Full programme, including abstracts

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Novotel, Victoria Street, Bristol BS1 6HY





## WEDNESDAY 27th January 2016

11:00-12:30 Opening plenary - Victoria Suite (ground floor)

### A shared vision for future – bringing different traditions together

*The movement for change in agriculture embraces a wide range of agroecological traditions, from integrated pest/crop management to permaculture, from organic farming to agroforestry and holistic management. Are they really all uniquely different, or is the common ground they share, in terms of ideas and history, more important?*

**Chair: Lawrence Woodward (ORC Policy Adviser)**

#### Phil Jarvis (Allerton Project): Rejuvenating Our Landscape – The Allerton Approach

My personal vision for the future of farming and food is:

- More shared goals and cooperation between DEFRA's agencies, farmer's representatives and industry stakeholders to develop 'common ground' and a 'win win' approach to the environment, practical farming and food production.
- A functioning market place that is less reliant on subsidies and grants that provides the mechanisms for a profitable less bureaucratic industry. This will allow us to invest in solutions for the challenges ahead.
- Innovation that combines well researched technology and sound agricultural husbandry, that can be transferred with the skills required, to our next generation of land managers.
- A farming landscape that embraces the environment, rejuvenates our soils and continues to support our rural communities.

#### Christine Gosling (Berkeley Farm):

As an organic dairy farmer, my vision of the future of farming and food is one of balance where:

- everything that is borrowed or taken from nature is paid back or compensated for .
- every person is fed adequately with a balanced , nourishing diet, relieving the pressure on the earth to produce higher yields of resource intensive and less healthy food. and
- there is a balance of respect for biodiversity and our need to produce food.

#### Jyoti Fernandes (Land Workers' Alliance and organic smallholder Fivepenny Farm, Dorset)

As a small-scale producer and representative of the Land Workers Alliance, our vision for the future of agriculture is:

A much higher percentage of land in the UK farmed sustainably with a large proportion of food being produced on small and medium scale farms primarily for British markets to contribute towards greater food security. Research that we have undertaken illustrates that it is possible to feed the projected population of the UK with small and medium scale farms using sustainable agriculture. We envision that this model of agricultural development would have greater benefits to the UK than a food and farming strategy based on sustainable intensification of larger scale industrial agriculture and the export economy.

#### Jonty Brunyee (The Pasture-Fed Livestock Association and Cotswold organic farmer)

As a pasture-fed organic livestock farmer, my vision for the future of farming is:

A farming system that provides nutritious food from high welfare ruminants, positive economic returns for farming families and environmental regeneration. I believe that beef, sheep and dairy systems based on a natural diet of 100% pasture (grasses, herbs and legumes) offers a sustainable solution to many of the problems associated with the livestock industry today. I will highlight the benefits of dropping the inefficient and damaging grain habit and discuss how the growing herd of farmers that follow the Pasture for Life ethos are rebuilding soils, soaking up rainwater, providing pollinator and farmland bird habitat, improving animal welfare and rearing livestock that produce great tasting meat and milk with enhanced nutritional profiles. Moving to an all grass system does not necessarily mean reduced stocking rates and reduced profits either. Evidence collated for the PFLA It Can Be Done booklet suggests the opposite. High output and reduced costs are possible, and exciting opportunities exist for branding and added value sales. It's a no grainer!

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12:30 - 14:00 Lunch - Elements Restaurant (ground floor)



## 14:00 - 15:30 WORKSHOPS 1

**Business tools and support for new entrants/  
converters. Victoria 1 Room (ground floor)**

*Ensuring financial viability is crucial for new businesses and for those entering conversion. What tools are available for planning/benchmarking and how can the support mechanisms available be used best for business success?*

**Chair: Susanne Padel (ORC)**


**Phil Sumption (ORC): Business tools for growers,  
including horticultural costings**

Making financial data 'fit for purpose' for small-scale growers was the mission we set ourselves as part of Organic Centre Wales's Better Organic Business Links (BOBL) project. There is an absence of tailored information on the viability and productivity of market gardens and small-scale horticultural holdings growing for supply chains in Wales (but of course not just Wales!). The problem is exacerbated by a lack of financial skills/knowledge of new entrants, for example on setting prices, estimating the cost of production and uncertainty about choosing a business model.

We designed a horticultural costings tool to try and account for the complexities of complex systems in an easy to use step-by-step format that should allow the grower to compare the cost of different crops /crop groups and their margins, in a meaningful way.

**Tony Little (Sustainable Farming Consultancy):  
Support mechanisms for conversion in England  
and Wales**

Organic conversion can be a challenging time, both in terms of the farming system and the farm business. Tony Little outlines the key resources and support schemes to help farmers and growers through this potentially tricky period including government support schemes, conversion planning tools and sources of information and support.

**Laura Creen (School Farm CSA): Struggles and  
successes of a new grower**

Having completed her Soil Association apprenticeship in Feb 2011 Laura has spent the past 5 seasons working for CSAs. First a hard 6 months in a brand new community led scheme in Norwich (for 100 members) which was a massive leap from the apprenticeship, and proved too stressful to continue. Then an 18 month stint at a charity who chose to close the CSA after the wettest year in 100 years when the funding ran out. Lately though she's spent the past 3 seasons working as a co-director of the grower-led School Farm CSA outside Totnes, Devon which in 2016 will deliver to 65 members from 2.5 acres. She's had enough trials to be able to speak about the struggles and needs of new growers, and also about where she found the help she needed to continue.

**Eyes on the prize: the long view on weed control  
and soil maintenance (OF&G/ORC)  
Victoria 2 Room (ground floor)**

*An interactive workshop looking at new options for mechanical weed control and ecological*

*strategies, focusing on farmer experience.*

**Chair: Steven Jacobs (OF&G)**


**Jonathan Storkey (Rothamsted Research):  
Why the world needs Weed Biologists.**

The discipline of weed biology has suffered a steady decline in funding and support over the past three decades beginning with the closure of the Weed Research Organisation in 1985. Part of the reason for this decline has been the efficacy of modern herbicides meaning in conventional systems, as long as you can read the pesticide label, weeds can easily be controlled. However, the loss of active ingredients due to European legislation and the evolution of herbicide resistance have highlighted the need for integrated weed management that relies on knowledge of weed biology and the response of different species to alternative management scenarios. In addition, increasing recognition of the positive role weeds play in the agro-ecosystem as a food source for invertebrates and birds has further highlighted the need to understand weed biology. These drivers have led to a renaissance in weed biology in the UK with a recent £1 M investment in a large project to improve the control of herbicide resistant black-grass. Current activities in weed science at Rothamsted will be reviewed with an emphasis on how the tools being developed are relevant to organic systems.

**Nicholas Corp (Shimpling Park Farms):  
Controlling blackgrass on an organic arable farm:  
our approach**

Blackgrass control is paramount to the current and future success of Shimpling Park Farms, with heavy weed infestations a major constraint on yield. The starting point of formulating a management strategy was understanding the weeds physiology, and then applying this understanding to our previous practices, highlighting the areas in which we needed to improve.

The reintroduction of livestock onto the farms has allowed us to increase the length of our fertility leys, a proven method for reducing viable seed numbers. The sheep are also involved in grazing wheat trials as part of the Duchy Future Farming Programme. Cropping has moved from all winter to 50/50 winter/spring, allowing better control of the predominantly autumn germinating weed before spring crops. Blackgrass thrives in wet, compacted soils, which we have addressed by introducing a maintenance scheme for existing drainage and introducing a 9m Controlled Traffic Farming system to confine compaction to the smallest possible area. In crop weeding practices have also been made more robust, with all crops being mechanically inter row hoed to reduce blackgrass plant numbers in growing crops.

If we can improve the use of every tool in our toolbox, the cumulative effect on our blackgrass control will be greater.



### **Tim Chamen (Controlled Traffic Farming): What role can controlled traffic farming play in a low input ecological production system?**

Definition of controlled traffic farming and how it improves the management of soil compaction at all scales of mechanised production. Constraints imposed on weed control and organic matter sequestration by conventional random traffic systems, particularly those using reduced tillage and no-till. Soil-related benefits of traffic control, how it is achieved and farmer's experiences of conversion and operating costs and practical issues. Potential of the next generation of CTF mechanisation to deliver unprecedented precision and additional and more extensive benefits that also embrace all types of tillage, including ploughing.



### **Forage production for improved animal performance (IOTA/SOLID) Victoria 3 Room (ground floor)**

*The aim of the workshop is to draw on research and practical experience of multi-species leys to improve forage species selection and management to maximise animal production and building soil fertility.*

**Chair: Mark Measures (IOTA)**



### **Ian Wilkinson (Cotswold Seeds): The benefits of complex mixtures for livestock farmers**

How using herbal leys and other complex mixtures brings benefits in terms of healthy soil, healthy animals and money in the bank.

### **William Waterfield (The Farm Consultancy Group): Managing multi species leys (Herbal / Diverse Swards) for dairy, beef and sheep**

Do multi species swards grow more dry matter than ryegrass based leys Are multi species leys more productive than ryegrass based swards under organic and low input systems? These are two of the questions that William and a group of farmers have been trying to answer over the last few years. Whilst many questions remain and challenges will need to be addressed it does seem that multi species herbal leys have an important role to play in both the short term forage output and as a way in the longer term of building soil organic matter. During this workshop we will discuss the importance of quality as well as quantity, and how longer grazing rotations can be used to ensure an extended grazing season and less reliance on conserved forages. We will look at what factors need to be considered in designing a diverse ley mixture. Managing these swards on a mob grazing basis does seem to have enabled soil organic matter to be built up faster than one is normally led to believe.

### **Wil Armitage (Organic dairy farmer at Keythorpe Farms): Managing soils and using organic fertilizers to achieve high Brix forage**

Starting with the Soil mineral Base Saturation levels and a plant diverse crop or diverse cropping rotation, the aim is to produce a fertilizer plan that will stimulate and multiply soil microbes to

mobilise soil minerals, absorb nitrogen from the air and produce large amounts of high integrity forage with a high Brix level.

He will draw from these experiences and his own organic dairy farming business to give an insight into how he aims to increase Dry Matter yields to 10 t DM /ha from his grazing platform.

### **Which soil test for my system? (SA/ORC) St Mary Room (first floor)**

*First results from the GREATsoils (Growing Resilient Efficient And Thriving Soils) project and farmer/grower views on different soil assessment options.*

**Chair: Ben Raskin (Soil Association)**



### **Anja Vieweger (ORC): GREATsoils – Project introduction and outcomes of four grower consultations**

Farmers and growers are concerned about the current health of their soils (compared to 30 or 40 years ago), and some of these concerns are supported by soil analysis data collected over the same period. Most farmers and growers understand the importance of soil health for the productivity, sustainability and profitability of their businesses, but many face significant challenges when interpreting results from laboratory analysis or when choosing suitable tools or methods for assessing the health of their soils beyond the standard pH, P, K, Mg analysis. To be of value to growers and farmers, methods for soil assessment should not only measure soil health, but should also provide information that can be used to inform decision making in relation to soil management. During a series of grower consultations in autumn 2015, regional grower groups in the UK discussed different approaches to soil assessment; what methods they find useful and reasons why others are not very commonly used. They were asked to rate a list of categorized soil assessment methods, and the first results will be discussed in this session.

### **Paul Smith (Loddington Farm): A fruit grower's experience with different tools for practical soil assessment**

Loddington Farm Ltd are a conventional top fruit business growing dessert and culinary apples, pears, apricots and cherries for the UK supermarkets. Production is spread across four sites, two of which are owned and two farmed under contract. The geographical spread helps mitigate the risks of frost and pest and disease. Committed to the principles of Integrated Pest Management, Loddington farm Ltd constantly reviews its practices with the ultimate aim of producing top quality food in an environmentally sustainable way. The challenges we face with regards to our crops and our soils are around a perennial crop which limits how we travel across the ground. The demands of the crop throughout the year mean that we often travel on the ground when it is too wet and therefore compaction is an issue. In common with most farms: we do not choose the soil in which to grow our crops. We have to do the best with what we have from heavy Wealden clay to stony greensand loams. Our approach to our soils stems from their inherent and dynamic properties. We may not have a choice in what we grow our crops in but we have myriad choices over our impacts on the soil over time. As a business we would like to move to a regenerative agriculture whereby measureable indices of soil health improve rather than decline as a result of our activities.





### Simon Gardner (G's) – A veg grower's experience with different tools for practical soil assessment in the field

Soils are the most important part of my farming business. The black peaty fen is in decline through oxidation and soil erosion, to maintain future production it is vital that I reduce and reverse the effect of soil erosion. Understanding soils current health is the starting point to allow us to understand where we are, how we are doing, what works and where to go next. But this wasn't as easy as I expected.

I have used a range of tools over the past year from a spade, digging larger profile pits, a range of soil analysis from standard nutrient test through to the soil health reports giving detail on microbial activity, soil health index and even drones to help in the understanding and measuring of soil health within the farming business.

### Food Sovereignty: Linking the global and local (LWA) St Nicholas Room (first floor)

*This workshop aims to demonstrate how the Food Sovereignty Movement is bringing democracy to the global food system, and explore what a UK National Food Policy based on Food Sovereignty Principles would look like.*

**Chair: Josh Brem-Wilson (CAWR)**



### Patrick Mulvany (former Chair of UK Food Group): Food Sovereignty: from concept to reality

Food sovereignty, as a concept, was developed in 1993 in reaction against the imminent WTO agreement that could discriminate against smaller-scale and more organic food producers, who provide the world with most of its food. The International Peasant Movement, Via Campesina, coined the Spanish term Soberanía Alimentaria (Food Sovereignty in English) that means 'having control over the food system'. It was launched in Rome at the time of FAO's 1996 World Food Summit and immediately gained traction, especially among those who campaigned to get the WTO out of Agriculture. In 1992, the Right to Food was included as a key element of Food Sovereignty. The 'concept' was transformed into a clear 'framework' at a landmark international meeting in Mali: Nyéléni 2007: forum for food sovereignty, which included the participation of 500 representatives from food producer, consumer and environmental movements. At Nyéléni 2007, in addition to adopting a broad definition, 6 pillars of food sovereignty were agreed. These clarify what the movement stands for and what it opposes. The outcome is a grassroots movement in every corner of the world that defends an environmentally sound, biodiverse and nutritious food system for both rural and urban peoples.

### Adam Payne (European Co-ordination of Via Campesina, LWA): A European perspective on the politics and practice of food sovereignty

This presentation will focus on exploring the politics and practice of Food Sovereignty in Europe. We will look at how the vision has been developed by the European Coordination of Via Campesina, and other grassroots civil society organisations, into a credible framework for a localised, democratic and sustainable solution to the problems of the industrial food and farming system in Europe.

The talk will blend examples of food sovereignty in practice, with an analysis of the political significance of the Food Sovereignty vision in the European context, and a look forwards at the development of the European food sovereignty movement.

### Rebecca Laughton (Land Workers' Alliance): Food Sovereignty for UK Farmers

Although originating in the global south, the need for people to regain control of the food system in the UK is also important. Organic producers are key players, due to their independence from the agri-industrial inputs that tie many farmers into the globalised commodity market, and their closer links to the consumer than the average farmer. The UK Food Sovereignty movement began officially at a gathering in July 2012 (although unofficially the organic movement has been working on Food Sovereignty issues for years), and the Landworkers' Alliance (LWA) emerged from that meeting. It brings together small and medium scale, ecological farmers and growers, under the Food Sovereignty banner to campaign and develop the skills necessary for a saner future for the food and farming system. The activities of LWA are underpinned with the 6 principles of Food Sovereignty (which include working with nature, focussing of food for people and the localisation). The LWA is asking farmers and others in the movement what they would prioritise in a National Food Policy based on Food Sovereignty Principles, and during the discussion part of this session we will be asking you, as organic producers, what policy ideas you would like to see in such a national food policy.

### Best practice guide to harvesting woodfuel from hedges



Download a copy from <http://tinyurl.com/TWECOM> or pick up a hard copy from the ORC stand

**16.00-17.30 WORKSHOPS 2****Succession and innovative land access schemes (LWA) Victoria 1 Room (ground floor)**

*Three models of succession will be examined from the perspectives of a retiring farmer, a land trust and a new entrant with a lifetime lease on a smallholding.*

**Chair: Rebecca Laughton (Landworkers' Alliance)**

**Ed Goff (A retiring dairy farmer): The ingredients for a successful share farming arrangement**

I explored the possibility of share farming and contract farming and chose the latter with a local organic farmer as contractor.

**Adam Reid (Farm Step, The Earth Trust): Land access for new entrants: the nuts and bolts**

The Earth Trust set up Farm Step to provide access to land for aspiring farmers and entrepreneurs facing the barrier of land prices or lack of experience. Seven years on, we have a model which is still evolving but now supports a growing community of integrated, independent producers feeding local communities. I would like to share how this model works and hope to convince landowners of the multiple benefits that land partnerships can bring, invigorating not only their own land and stimulating the local food supply chain, but diversifying their income too. I will describe ways in which our current tenant businesses co-operate and complement each other, the process by which we select new tenants and the various agreements that can be used to formalise a relationship. Relationships are rarely without difficulties and I would like to share some of what we've learnt so that it may benefit prospective tenants and landowners interested in setting up similar access to land schemes.

**Helen Kearney (Greenham Reach, Ecological Land Co-operative Lessee): A new entrant's perspective**

Greenham Reach is the first set of three affordable, low impact smallholdings established by the Ecological Land Co-operative. Smallholders can either take out a 999 year lease or rent to buy agreement on a holding, and are provided with shared infrastructure (a barn, rainwater harvesting tanks, a solar array and a water treatment system) and temporary residential planning permission. Helen, moved to Greenham Reach in March 2015 with her husband and family with a 25 year rent to buy agreement. We have 5.5 acres that we pay £293 per month for 5 years which will then increase to £586 for 20 years. This arrangement made the site the most affordable way to access a land based livelihood. Helen is a Medical Herbalist and the small holding grows medicinal herbs that are processed in to medicines and herbal products, cut flowers and trees.

**Finger on the Pulse (ORC/CAWR/Garden Organic) Victoria 2 Room (ground floor)**

*As 2016 is the FAO International Year of Pulses, this workshop will include speakers highlight the practicalities of developing, growing and marketing novel legume crops in the UK.*

**Chair: Margi Lennartsson (CAWR/Garden Organic)**

**Josiah Meldrum (Hodmedod): The growing potential of the UK market for organic pulses**

Hodmedod emerged from the Norwich Resilient Food Project, a community initiative led by Transition City Norwich and East Anglia Food Link that ran between 2009 and 2012. The company has built on this work; aiming to create shorter, more transparent supply chains for a range of often overlooked and under-valued crops, build relationships with farmers and help to create more diverse farm systems and diets.

Initially creating a UK market for field peas and fava beans – grown in Britain for centuries but now rarely eaten – Hodmedod began by redirecting small quantities from the large volumes destined for export. As sales increased the company has been able to work directly with farmers and growers to secure supplies of existing crops and develop new ones; including creating new human consumption markets for British-grown legumes.

Hodmedod believes that for some higher value, lower volume dried seeds and grains there's an overlap between horticultural and arable approaches to cropping. This presentation will outline our current trials, the market gaps we see and the opportunities (and obstacles) these crops present to organic growers.

**Mark Lea (Green Acres Farm): Give peas a chance! A farmer's experience of growing organic pulses**

After many years of growing organic feed peas I became increasingly unhappy with the market's lack of appreciation for the effort that was going into the crop. Research of the pulses available for human consumption led me to Hodmedod's, and contacting them completely changed the direction of the enterprise. Being market led is for me, one of the key principles of organic farming, and working directly with such a dynamic and principled retail company has been really positive for us. Quality requirements are obviously much higher, and growing a range of different peas has meant we've had to change the way we work and look for ways to make sure we produce the best quality peas we can.

**Georg Carlsson (SLU) and Per Modig (Fagraslätt Farm/HIR, Skåne, Sweden): Swedish production of organic grain legumes for food – insights from research and practice**

Swedish consumers' interest for vegetarian and organic food is rapidly increasing, which provides new opportunities for farmers to diversify their cropping systems via increased production of e.g. vegetables and grain legumes such as beans, lentils and peas. Grain legumes are excellent sources of healthy, protein



rich food, and provide valuable additional ecosystem services via symbiotic nitrogen fixation and diversification of cropping systems. The currently increasing market demand can therefore stimulate a positive economic development for organic farmers who succeed to increase their production of the desired grain legumes. At the same time, increased grain legumes production has large potential to improve the productivity of subsequent crops and enhance soil fertility via their inputs of biologically fixed nitrogen. We will present some of our practical experience, experimental results and ongoing activities within research and development for increased organic production of common bean and lentil in southern Sweden. Some of the issues that we will talk about are weed management and harvest technology for efficient grain legume production. We will also inform about an ongoing participatory research project together with organic farmers about intercropping grain legumes and cereals.

is disappointing and could discourage consumption, especially by pregnant and nursing mothers or young children - the very people to potentially benefit most from higher omega-3 fatty acid consumption. As well as producing milk with sub-optimum levels of trace elements for consumers, could organic management also be detrimental for our cows, possibly reducing fertility and/or calf viability.

This talk plans to explore the trace element content of organic milk, how it might be enhanced and can we have too much of these good things.

### **Mette Vaarst (ICROFS): The organic approach to ensuring optimum minerals for animal health and product quality**

In organic animal husbandry, many uncertainties and inconsistencies exist regarding provision with minerals and trace elements. The organic principles of health can be viewed as unique and call for a focus on resilience which can be useful in the way in which diets and mineral compositions are planned for ruminants. The organic principles stress that animals should be given a framework and conditions within which they can meet their natural needs in different life situation, such as growth, yielding and pregnancy. When it comes to mineral supply, the question is, however, what their 'natural needs' are, and to which extent they can meet them through access e.g. to natural pastures and different types of feed. The presentation will focus on these aspects and how this can guide the organic dairy farmer regarding mineral and trace element supply. Studies on the use of herbs in grass fields have mostly dealt with the milk quality, and less with animal health, although there might be interesting observations and perspectives regarding animal health. Different strategies exist, using high nutrient feed stuffs, diverse diets, and different types of supplement minerals. According to the organic principles, it is also important to combine the supplement of minerals with priorities such as using local feed stuffs and high proportion of forage to ruminants have to be combined as part the feeding strategies.

### **Tackling the challenges of organic fruit and viticulture (OGA) St Mary Room (first floor)**

*This workshop will look at some of the challenges that face the organic fruit and viticulture sector in the UK and some potential solutions.*  
**Chair: Phil Sumption (ORC)**



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### **Martin Soble: Challenges of organic fruit production – Ten things I'd do differently**

Martin & Rachel Soble set up their organic farm, Carey Organic, in 2004 with top fruit, soft fruit and vegetables on 70 acres of good quality sloping land on the banks of the River Wye. Over the last ten years the business has developed and now mainly supplies the key regional wholesalers and national box schemes. The 18 acres of top fruit including apples, pears, plums and cherries, was planted from 2005 and has provided a number of challenges, successes and disappointments especially with changing weather patterns and market demands. The soft fruit plantations have proven productive but demanding of labour and logistic resources. Choosing to grow only outdoors without the protection of poly-tunnels adds to the challenges but reduces the pest and disease problem and significantly lowers fixed costs.

### **Minerals: can they be too much of a good thing? (IOTA/SOLID) Victoria 3 Room (ground floor)**

*There is evidence (some) organic livestock are being supplied with excessive levels of trace element minerals and in other cases are under supplied, with potentially serious effects on animal health and human nutrition. This workshop will endeavor to quantify the extent of the problem and identify the best strategies to deal with it.*  
**Chair: Mark Measures (IOTA)**



### **Liam Sinclair (AHDB Dairy): Are conventional and organic dairy cows provided with optimum minerals?**

Minerals have traditionally been supplemented to cattle to rectify deficiencies that may be present in forages and supplementary feeds to ensure optimal performance and health. In a recent survey of winter mineral feeding levels to dairy cows in the UK, Sinclair and Atkins (2015) reported that most minerals were being fed at levels well above requirements, with organic herds supplementing at a similar level to non-organic herds. In support of this, Kendall et al., (2015) reported that approximately 40% of cull dairy cattle and 17% of cull beef cattle had liver copper concentrations above the recommended maximum limit. Over-supplementing minerals not only increases diet cost, but can have a negative environmental impact (e.g. phosphorus), interfere with the absorption and metabolism of other minerals, and for copper in particular, be toxic. Reasons for over-supplementation are varied, but undoubtedly many farmers wish to avoid signs of deficiency, which are widely reported, particularly in high forage or extensive grazing systems. To reduce these issues, mineral feeding levels should be based on national recommended feeding levels, include a forage analysis, take account of all sources (e.g. water, free access minerals, boluses), and have one person on the farm who has overall responsibility.

### **Gillian Butler (Nafferton Ecological Farming Group): Investigation into mineral levels in organic dairy herds**

Milk is a significant source of iodine in our diet but it appears that organic milk contains less iodine than that produced under more conventional management. Since organic milk is superior in many other nutritional components and considered to offer health benefit, its lower supply of iodine (and other trace elements?)





### **Will Davenport (Davenport Vineyards): The challenges of growing organic outdoor grapevines in the UK**

The UK is a marginal climate for grape-growing and requires a significant level of expertise to succeed. While the English wine industry is growing at a rapid pace, there is also an increasing interest in organic viticulture. Will's talk will discuss the particular challenges he has faced over 15 years of organic grape growing in the UK climate, and some of the solutions that can be found. These include topics such as controlling weeds, preventing diseases and maintaining the vines in general good health.

### **Lucius Tamm (FiBL): CO-FREE: four crops, four years – where are we now?**

The project CO-FREE is working on innovative strategies for copper-free low-input and organic farming systems ([www.co-free.eu](http://www.co-free.eu); funded by the European Commission, 7th Framework Programme). In CO-FREE, 11 scientific institutions plus 9 small and medium enterprises are working together over a period of 54 months.

The CO-FREE project aims to develop innovative methods, tools and concepts for the replacement of copper in European organic and low input fruit, grapevine, potato, and tomato production systems. The component strategies include (i) development of alternative compounds, (ii) 'smart' application tools and (iii) by integrating these tools into traditional and novel copper-free crop production systems. CO-FREE also developed strategies to foster consumer acceptance of novel disease-resistant cultivars by consumers and retailers and assesses the economic and ecological impact of the developed tools.

Work is after 48 months still in progress. A range of alternative products (botanicals and biocontrol agents) was developed and explored in grapevine, apple, potato and tomato cropping systems showing promising results. Decision support systems were developed for grapevine and potato crops in order to better target fungicide sprays and to reduce copper use. Use of robust varieties is one of the key strategies for copper reduction, especially in potato production. We explored strategies to fostering acceptance for novel varieties by consumers in order to overcome one of the most important hurdles for broad adoption. First results are now available from CO-FREE's evaluation of 'apple production systems that explore the potential of advanced eco-orchard and agroforestry production systems, showing the potential and limits of these approaches.

### **Agroecology and organic action plans – time for England to catch up? (ORC/APPG Agroecology) St Nicholas Room (first floor)**



## **APPG AGROECOLOGY**

*Scotland is launching a new organic action plan. France has had an agroecology action plan since 2014, embracing pesticide and antibiotic reduction, pollinators, organic farming and agroforestry. Many other EU countries have similar action plans, some like Denmark closely integrating them with their Rural Development Plans. Could a new action plan for England make a difference?*

**Chair: Ruth West (Senior advisor, APPG on Agroecology /The Real Farming Trust)**

### **Wendy Seel (Chair, Scottish Organic Forum): Building a new Organic Action Plan for Scotland – process, progress and insights**

The new Scottish organic action plan will be launched today, 27th January 2016. The plan has been built from the bottom up, and has involved a large number of stakeholders. This presentation will describe the plan, the process used to in its development, and lessons learnt along the way.



### **Eric Giry (French Embassy): The French agroecology action plan: goals, process and results**

The French agroecology project reflects the concerns found elsewhere in the world :

- The challenge of food and nutritional security — providing high-quality, safe and healthy products to over nine billion people by 2050 ;
- The social challenge of combating both poverty in the agricultural world and the rural exodus, and increasing the resilience of production systems to unforeseen events
- The environmental challenge of conserving resources and responding to the issues of climate change

Agriculture is obliged to change and adapt in response to them. Going forward, agriculture must move beyond conflicting views on growth models and ensure changes in agriculture and the agricultural and food-processing industries are part of a forward-looking approach.

France launched its agroecology project in response to these issues in 2012. This is an ambitious, inspirational project that aims to shift agriculture towards the objective of combining economic, environmental and social performance. It has given rise to a wide-ranging action plan, broken down into a variety of projects covering all areas (teaching, support for farmers, reorientation of public support, public and private research, etc.). The project is a joint development between the French Ministry of Agriculture and all key players in the sector.

### **Susanne Padel/Nic Lampkin (ORC): Review of European organic action plans and best practice examples**

National or regional organic action plans (OAPs) have been used increasingly to support organic farming across Europe since the mid 1990s. We present the key conclusions of a study conducted by ORC for IFOAM, reviewing recent experiences with OAPs and similar initiatives across Europe in 2015. In the 32 European countries, we found 14 with a current national OAP (10) or similar initiative (4). Often the impetus to develop an action plan comes from government, sometimes integrated with their Rural Development Programmes. We found several good examples,





where lessons learned from a previous action plan shaped the development of the next one, but also lapsing plans and lack of continuity. One common weakness (with some notable exceptions) is that many OAPs do not have specific targets or budgets for consultation and implementation, except for producer support

which is covered by the CAP. One important lesson for the organic sector is that OAPs are a strategic instrument for achieving organic sector goals and wider governmental policy objectives and for mobilising resources, rather than a policy goal in itself.

## 17:30 - 17:45 Break

## 17:45 - 18:45 Fringe sessions

### Organic pulses - how do we increase production? (GO/CAWR) St Nicholas Room (first floor)

*A stakeholder discussion to explore opportunities and challenges for expanding production of organic pulses in the UK. Farmers and researchers from Sweden will join us to share what they have learnt.*

### Skilled workers, apprentices and volunteers (OGA/LWA/Groundspring) St Mary Room (first floor)

*The pros, cons and ethics of various types of labour: should organic holdings rely on the voluntary sector? A look at the various types of apprenticeships, internships, traineeships and other learning/work exchange schemes available on holdings, alongside work experience placements and seasonal, temporary and permanent labour. Discussion about what types of workers and work scheme is best suited to different kinds of holding and applicant.*

### Innovative Farmers (ORC/SA) - Pint of Innovation Foyer/bar area

*Innovative Farmers is a not-for-profit network that gives farmers research support and funding on their own terms. Many of the best ideas in farming come from farmers. But most research happens off-farm. Innovative Farmers changes that. It helps farmers to find lasting solutions to practical problems.*



*Help shape the Innovative Farmers programme this year. Free drink for the first 20 people who join us!*

### SRUC/ORC partnership for MSc/PgDip Organic Farming Foyer/bar area

*Join us in the bar if you want to find out more!*

## 19:30 Conference dinner, bar and maybe entertainment... (bring your own instrument!)

### Organic wine/beer/cider

Organic wine, beer, lager and cider is available, organised by ORC through Vintage Roots. Prices include hotel corkage charges.

#### WINE £15/bottle

Hoopoe organic wines from Sicily:

Chardonnay

Pinio Grigio

Nero D'Avola

Merlot/Cabernet Sauvignon



#### BEER

Fuller's Honey Dew £4.50/50 cl bottle

St Peter's Ale £5.00/50 cl bottle

Black Isle Brewery Red Kite £4.50/33 cl bottle

Black Isle Brewery Goldeneye £4.50/33 cl bottle



#### LAGER

Samuel Smith £5.50/55cl bottle

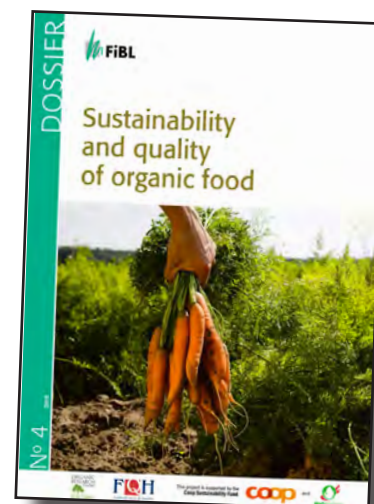
#### CIDER

Westons Wyld Wood £5.00/50 cl bottle

A limited supply of white and red wine will be available free of charge on the dinner tables.

### Sustainability and quality of organic food

£5 from ORC stand!



What constitutes the quality of our food? In addition to nutrient content and pesticide residues, the sustainability of food becomes more and more important. Experts from the Swiss Research Institute of Organic Agriculture (FiBL) have explored different aspects of the quality and sustainability of organic and conventional food in a new dossier.



## THURSDAY 28th January 2016

### 9.00-10.30 WORKSHOPS 3

#### Can technology and very short supply chains transform local food availability (Soil Association/OGA) Victoria 1 Room (ground floor)

*A plethora of new digital tools for food producers and retailers promise much, but what is the real potential. Are they the most effective way of shortening supply chains?*

**Chair: Ben Raskin (Soil Association)**



Organic Growers Alliance



#### John Cant (Marumarket): Results from the UK Veg Box Survey and tips for improving online marketing

John Cant, Marumarket presents the results of the first national UK Veg Box Survey and how you can use the findings to improve your online presence and digital marketing.

Key findings of survey

- Use what customers are saying to shape your marketing message.
- Digital Marketing and how to embrace it.
- Working together in the age of social media.
- What makes the perfect veg box software?

#### Carolyn Goethel (Food Assembly): How can you sell directly in the digital age?

The Food Assembly is a network of online markets with weekly community collection points, enabling direct trade between local food producers and groups of customers. Using technology to shorten supply chains, our vision is to establish a more fair and sustainable way to produce and consume food. By cutting out middle men, we bring power back to producers who are paid a fair price and to consumers who learn where their food comes from.

Following a huge success in France where the model started in 2011, The Food Assembly launched in July 2014 in the UK and other European countries. The community-led network has grown very quickly, connecting over 200 food producers with 20,000 customers across the country. The Food Assembly offers farmers a unique web tool for online selling while fostering in- person contact with customers. The ease of click-and-collect saves time, reduces food waste and constitutes a new way to reach customers. We'll be showing how web technology is innovating the food system and look at how the Food Assembly model works for farmers.

#### Holly Tiffen (Transition Towns Totnes): Grown in Totnes – How local are your grains, peas and legumes?

Grown in Totnes is a project that seeks to increase the range of local food available to the Totnes area. We are very fortunate to have a vibrant High Street with many food shops that stock a vast array of locally grown and processed foods. Local shops support

local businesses; local farmers, local bakers, local cleaners, local IT services, this is an example of a circular economy, where the money spent just keeps circulating locally. Food is one of the few commodities left that we can still provide for ourselves locally.

Grown in Totnes attempts to set a standard for 'local'. We aim to bring all of the stages of production, marketing and delivery to within 30 miles of the town; following the concept of local through the whole of the chain. At this workshop Holly will take you through the journey of how Grown in Totnes came in to being and brought the local community along in the process, she will describe the vision and discuss some of the pitfalls that they have encountered along the way in order to bring alive the reality of a resilient local food economy that includes plant based, protein rich foods.

#### More feed from our own resources (Organic Arable) Victoria 2 Room (ground floor)

*This session seeks to explore the challenges that are currently facing the animal feed sector.*

*With significant growth globally in the demand for organic*

*cereals and relatively static production area in Western Europe the sector is becoming further reliant upon imported supplies from outside the EU. The market for livestock products is increasingly interested in feed sourcing for provenance and quality criteria such as mycotoxins. We will explore how both livestock and arable producers can work together to face these challenges making both sectors more resilient.*

**Chairs: Andrew Trump (Organic Arable) and Neil Rowe (OMSCo)**

organic  
arable



#### Protected cropping in organic systems (OGA) St Marys Room (first floor)

*Results from the international BioGreenhouse project and different perspectives from research and practice on the sustainability of protected horticulture production.*

**Chair: Roger Hitchings (OGA)**



Organic Growers Alliance



#### Rob Meijer (Wageningen UR): Biogreenhouse COST Action – Knowledge on organic protected cropping made available to the industry by European experts

From 2012-2016 experts of 27 European and neighbouring countries work together within the framework of Biogreenhouse (COST Action FA 1105 [www.biogreenhouse.org](http://www.biogreenhouse.org)) to unlock and make available to the organic greenhouse industry – growers,





suppliers, teachers and students- the latest knowledge and to contribute to the EU R&D agenda. Five working groups, being Robust Planting Material, Soil Fertility, Suppressiveness and Water Management, Crop Health, Energy Saving and Climate neutral production and Sustainability and Standards, are writing papers, leaflets and books for science and practice; about compost making, fertilisation, water management, sustainability tools, organic seed treatment, energy saving, crop health and food safety.

The Action will be finished in April 2016 at an international symposium from 11-14 April 2016 in Izmir(Tr) ([www.oghsymposium2016.org](http://www.oghsymposium2016.org)). There will be a parallel scientific and technical program. This symposium is open for everybody who is interested in organic protected cropping. At that occasion all this work, written in English, will be published and will be freely available.

### **Lucia Foresi (CAWR): Comparing the usefulness of assessment tools in evaluating the environmental impacts of organic greenhouse horticulture**

This presentation refers to the Short-Term Scientific Mission done at the Institute for Agrifood Research and Technology in Cabrils (near Barcelona, Spain), in May-June 2015, as part of EU COST Action FA1105 'BioGreenhouse'. The Mission's main objective was to compare two chosen assessment tools, Life Cycle Assessment (LCA) and Public Goods tool (PGT), both in the form of Excel worksheets, to evaluate the potential integration between their data, so that the development of a single holistic assessment method could be planned. The presentation mainly highlights the methodological differences and potential common points between the tools, referring to a chosen case study (Tolhurst Organic, a stockfree horticultural farm located near Reading, UK) that was assessed with both, and then gives suggestions for further research in the future. While LCA gives quantitative results on impacts on key environmental categories, PGT shows ways to improve farming practices regarding a set of social, economic and environmental aspects through a simple scoring system. In this sense, trying to combine results from different assessment tools might be difficult because it emphasizes the lack of overall complementarity between them, but simultaneously it could be a useful starting point for an integrated discussion on production, use of natural resources and improvements of practices among decision-makers.

### **Pete Dollimore (Hankham Organics): Bringing in the Bugs: How can local biodiversity be harnessed in our greenhouses?**

One of the fundamental qualities of any good organic system is its ability to, not only exist alongside a flourishing natural ecology, but to utilise and enhance this potential powerhouse of stability and health.

The term 'protected' however immediately suggests a very different sort of cropping system. A degree of control can be exercised over environmental influences, which are tipped in favour of the crop. This inevitably leads to a strategy regarding the internal ecosystem and its interaction with the external.

Combining border controls with introduced biological agents may effectively regulate the establishment of pests in monocrop systems. However in diverse and continual cropping systems there is no 'down season' clear up and the balance of pest, predator and parasite has to be permanently balanced in favour of a viable harvest. Maintaining a healthy biodiversity inside as well as outside the greenhouse is needed to regulate a stable state of play. Examples and strategies for encouraging this, as well as situations where success has been varied, will be presented using case studies from the 0.7ha glasshouse at Hankham Organics as well as other mixed cropping protected systems.

### **Homoeopathy at Welly Level - unrecognised success (HAWL) Victoria 3 Room (ground floor)**

*Farmer's experience of using homoeopathy - as a treatment and an approach to managing livestock health.*  
**Chair: Lawrence Woodward**



### **Christine Gosling (Berkeley Farm):**

Chris and Nick Gosling run an organic 375 acre dairy and arable in Wiltshire. They have used homeopathy for nearly 10 years. With the threat of greater antibiotic resistance in the future farmers will need to turn to alternative medicines to treat their animals. Homeopathy can certainly be used successfully on the farm and *Homeopathy at Welly Level* is an excellent course for learning how to use it on your own animals.

### **Tim Downes (Shropshire dairy farmer):**

OMSCo dairy farmer of the year. 300 cow herd and finishing beef. Has used homeopathy for over 16 years. How we have used homeopathy on the farm and where we see it fitting into our long term strive to remain within the rules for an antibiotic free herd.

### **John Newman (Abbey Home Farm):**

John is farm manager at Abbey Home Farm in Gloucestershire. John will be speaking about their use of homeopathy at Abbey Home Farm, particularly focusing on its use with sheep, pigs and poultry. He will also share some of his thoughts and recollections of their use of homeopathy over the last 20+ years, including the 'evolution' of HAWL and its relevance to their staff.

### **Making seed sovereignty happen in the UK (ORC) St Nicholas Room (first floor)**

*This workshop will look at the future of organic seed production in the UK. What can be done to ensure resilience, diversity and security in our seed systems? We look at initiatives and networks working towards change.*

**Chair: Neil Munro (Heritage Seed Library, Garden Organic)**

### **Tom Brenan (Gaia Foundation): Enabling a UK & Ireland seed programme in support of biodiversity and resilience**

Seeds are the starting point for 9 out of every 10 bites of food available in the world today. However, most people have yet to make the connection between food and seed. Together with pressures from climate change and the effects of loss of biodiversity, there has never been a greater urgency to rebuild our seed diversity for greater resilience. In October 2014, the Gaia Foundation and partners organised The Great Seed Festival with two main objectives: to raise awareness of the importance of seed in our food system; and to link existing seed networks to inspire greater



collaboration and working. The festival highlighted that although there are a number of initiatives addressing issues around food there is relatively little being done to protect seed, revive seed knowledge and ensure the availability of good quality, local seed for commercial growers. A follow up meeting affirmed an appetite for a more joined up effort on seed work and led to the production of a feasibility study in October 2015 which outlined the potential for a robust, accessible and diverse seed system. The workshop will consider the findings of the study and the proposals for an exciting new UK and Ireland programme.

### **David Price (Seed co-operative): Resilient seed for sustainable farming**

Vegetable seed production in the UK has been declining for decades. Commercial pressures have led to an increasing proportion of F1 hybrid seed use, which in turn reduces the numbers of stakeholders involved in seed production, and in many cases removes it from the UK.

In the 2016 season we are looking for seed growers to help with the urgent work of reviving the production of UK open pollinated vegetable, herb and flower seed. We seek to act as a hub for small-scale certified growers who can produce the highest quality seed. It may be only one or two varieties, to start with, and we will provide help and advice as required. We have our own ideas of the varieties of seed that we need, but we are equally keen to hear from people who feel that they have particularly good conditions for particular crops or varieties. We want this to be a grower led initiative so we will welcome your ideas. We will take in harvested seed and

undertake cleaning and processing ourselves, before undertaking germination testing to ensure viability. Our plan is to reverse the decline in UK seed production, producing the best quality open pollinated seed, providing a resilient base on which to build a sustainable farming future.

### **Bruce Pearce (ORC): Insights about the temporary marketing experiment & the marketing of cereal populations**

Increasing climatic variation has had, and will continue have an impact on crop production and the economic viability of farmers. A way to insure against these impacts is to increase the diversity on farm. Increased genetic diversity within the crop can be a component of this. Genetic diversity can be delivered by growing a greater number of crops or varieties separately or as a mixture or by growing composite cross populations (CCP). Since 2001 the Organic Research Centre has developed CCPs of winter wheat in organic and low input systems. Aligned with this work are activities with UK and EU policy makers to address the EU legal framework that would allow for the marketing of populations. After nearly 15 years of work we are now at a point where some cereal CCPs can be marketed under a temporary marketing experiment. The paper will cover the production and development of the populations as well as an analysis of their performance along with insights into the development of new seed regulation policies as well as our initial experiences of working within the new marketing experiment.

## **10.30 - 11.00 Tea/coffee break in Foyer Area and Elements Restaurant**

### **11.00 - 12.30 WORKSHOPS 4**

### **Customer satisfaction. Ensuring consistent supply and quality of organic food (OGA) Victoria 1 Room (ground floor)**

*This workshop looks at the elements of keeping your customers happy. How to plan*

*your cropping schedules to produce quality and continuity/variety? Getting the basics of soil fertility and agronomy right and storing, packing and presenting for optimal freshness and appearance, while minimising waste.*

**Chair: Kate Collyns (Grown Green/OGA)**



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### **Alan Schofield (Growing with Nature/OGA): Variety is the spice of life!**

Since 1992 we have been supplying local organically grown vegetables direct to peoples homes within a 25 mile radius of our holding in Pilling Lancashire. We have during this time worked closely with 4 other local organic growers planning crop timings and sharing out the growing of crops for the box scheme which we run from our own holding. This talk will examine the crop planning and continuity issues we have encountered as well as highlighting our use of protected cropping space and the way that we have split the production up between the growers in a fair and amicable way. It is impossible to programme crops exactly and I will talk about how we get around any shortfalls that seasonal variations in the weather throws at us.

Variety and continuity are to me the most important factor in keeping our offering as varied as possible whilst offering value for money. Our customers enjoy the variety that we offer alongside the extended season of the basic crops that all enjoy. I will talk about which crops we grow for as long a season as possible as well as those which just appear for a month or two.

### **Roger Hitchings (RMH Consulting/OGA): The importance of the soil for consistent quality crop production**

This year's conference has an excellent focus on practical issues that are linked to the soil. One of the reasons for this is the fact that without a soil that can deliver the required level of fertility and manageability year in and year out a business is unlikely to survive for the long term. Horticultural production places the greatest demands on soil integrity.

Many experienced growers have shown and continue to show that it is possible to run successful horticultural businesses on soils that were not considered as entirely suitable when they started. The fundamental organic techniques of rotation, fertility crops, on-farm composting, careful cultivation, etc. are key to getting the best from soils considered to be marginal for horticulture.

In these times of more unpredictable weather patterns however the borderline soil may not be able to support the continuation or establishment of a horticultural business. This session will attempt to set out some basic soil requirements for a business seeking to reliably supply crops of consistent quality. These will include the usual elements of texture and structure but other elements such as effective drainage and favourable topography will be proposed as being of increasing importance going forward.





### Adam York (Glebelands Market Garden): Grading and presentation

Organic growers entered the 21st century with a reputation for patchy quality and presentation. Amidst the most sympathetic market of our lifetime we can employ reasonable standards of post harvest care and functional packaging to meet a public raised on supermarkets and sell a lot more veg.

### Better soil management (ORC/SRUC) Victoria 2 Room (ground floor)

*Soils are the foundation of agricultural production but also inextricably linked to food and culture. In this session we explore some of those links and also explore tools and methods to improve soil structure and crop nutrition.*

**Christine Watson (SRUC): Chair**



### Bruce Ball (SRUC): Soil – connecting land, people and food

Developing connection with the soil can improve soil management and conservation and also integration and function in the food system. Soil connection is shown by physical contact and by comparison with the human psyche. Physical connection with the soil is commonly by sight, feel or smell such as when assessing the structural quality of the soil with a spade or from a soil profile. Soil structural quality influences crop yield and quality and tillage and nutrient inputs. Structure can be described and scored by using the Visual Evaluation of Soil Structure (VESS) which employs a spade test for the topsoil and a profile test for the subsoil. The soil is scored based on how hard it is to break up, the size and shape of aggregates, the amount and size of pores, the distribution and appearance of roots, the smell and colour. Connection by comparison with the human psyche helps the development within us of soil-like properties such as integration, networking and recycling. These can bring awareness of changes in food consumption and in lifestyle required for the success of agroecological approaches to feed us. For a brighter future, we not only need to conserve our soil, we need to become more like it.

### Sally Westaway (ORC): OSCAR Cover Crop and Living Mulch Toolbox

The Cover Crop and Living Mulch Toolbox is one of the main outputs from the OSCAR European research project which focuses on developing sustainable Conservation Agriculture systems and increasing the diversity of cover crops and living mulches. The Toolbox consists of three main elements; a wiki; a species database; and a decision support tool, presented as a series of web based tools. The content draws on scientific literature, technical information and results from the field trials, it is partially user interactive and designed to be used by farmers, advisors, researchers and members of the general public. The Toolbox aims to make current knowledge on cover crops and living mulches widely available and will help you identify suitable cover crop and living mulch species and varieties as well as practical management advice. This workshop will take you through the development of the Toolbox and will include a short demonstration the different tools in the box.

### Mark Measures (IOTA): Legumes and legume mixes

Reliance on the use of legumes for the supply of nitrogen is fundamental to all genuinely sustainable farming systems. Over the years we have gravitated towards simpler mixtures with fewer legume species and sometimes no companion grasses due to ease of management and the very diverse characteristics of different forage legume species, including red, white and crimson clover, lucerne, sainfoin, trefoil, medic and vetch. We will discuss how and why we should be growing much more diverse legume mixtures in our leys and green manures, with real benefits for soil fertility and structure, forage production and biodiversity in a healthy farming system.

### How to sequester more carbon on your holding (OGA) St Mary Room (first floor)

*Overall aim: to enable farmers/growers to have the knowledge of how to build carbon in their soils, both improving their farms and sequestering atmospheric carbon.*



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**Chair: Francis Rayns (CAWR)**

### Laurence Smith (ORC): Soil carbon sequestration and organic farming – a review of the evidence

With the recent interest in the potential for agriculture to capture atmospheric CO<sub>2</sub> through the accumulation of soil carbon, measurements in this area have been viewed as increasingly important. Promoting soil health and encouraging the development of soil organic matter have always been central tenets of the organic approach, and the potential contribution of organic systems to this area has been of considerable interest. Practices that have been shown to increase soil organic matter, such as the use of organic fertilisers, fertility building leys with legumes and cover crops are commonly found on organic farms and a range of long-term field trials have found higher organic matter contents in organically managed soils. In addition to storing carbon, higher levels of soil organic matter can enhance the nutrient buffering capacity, water holding capacity and microbial activity within soils and help to increase the soil's fertility. This presentation will provide an overview of the current evidence in this area highlighting the potential role of organic practices for the maintenance of soil carbon and soil health.

### Iain Tolhurst (Tolhurst Organic): Building soil carbon at Hardwick – an interaction with biodiversity

Improvements to soil carbon have to be viewed within the whole system of the farm. It is undoubtedly challenging to improve soil carbon in horticulture, without bringing in large amounts of organic matter, often sourced from conventional farms. You need to look at the whole farm and see where you can build long term carbon. Features such as woodlands, hedges, shelter belts, beetle banks and field margins will be the most productive in terms of soil carbon accumulation, with more modest amounts possible within the actual growing land, primarily through the use of green manure fertility building leys and the possible addition of composted wood chips. So you will need to consider incorporating more of these features without reducing your crop yields. To justify the inclusion of trees and other hard carbon features you have to look at the additional benefits: shelter, increased biodiversity to control pest



and disease problems, enhanced soil microbial activity etc. It is important to have an idea as to what the carbon picture really is upon your farm, so do a whole farm carbon analysis. Regular soil analysis for carbon is essential and you will need to do this for many years before you get to see any real changes. We have a duty to ensure that we are not depleting our carbon reserves and are managing to maintain and increase the carbon long term.

### **Ed Revill (Swansea Biochar): Soil carbon regeneration through agroecology and biochar.**

Human interaction with soil very often results in the release of soil carbon with adverse consequences for both soil and climate. It is vital that we understand concepts such as soil aggregation and that we change the ways that we interact with soil and soil carbon in particular. When the factors which influence soil carbon are understood and applied to cropping systems it becomes possible to produce crops in ways which firstly minimise the release of soil carbon, secondly optimise carbon draw down (through optimising plant photosynthesis) and thirdly optimise the retention of carbon in soil. Factors which influence the retention of carbon in soil can be divided into those which influence soil biology (for example soil moisture) and those pertaining to different forms of carbon compounds in soil.

I will discuss soil carbon influencing factors with reference to my own market garden which combines biochar producing stove and heating systems with a coppice producing alley cropping system, using no walk, minimum dig beds to produce mainly vegetable crops for local sale and coppice for use in the biochar producing stove systems. Rather than digging the biochar into the soil, as is usually done, it is then returned to the cropping area in a mulch.

### **Can tree planting on livestock farms lead to a net increase in productivity and profit? (Woodland Trust) Victoria 3 Room (ground floor)**

*Hear from a vet, farmer and an academic how trees can help support sustainable livestock farming and explore whether you feel this is credible, what questions remain to be answered and what the barriers to implementation are.*

**Chair: John Tucker (Woodland Trust)**



### **Emily Gascoigne (Synergy Farm Health): Flocks and foliage**

Key drivers of sheep flock profitability include number of lambs reared per ewe to the ram, minimising losses and optimising the speed and efficiency with which those lambs can be finished. The talk will consider some key threats to this production and the role of trees when integrated into livestock farming. Emphasis will be placed on the effects of trees on drainage, changes of conditions underfoot and provision of shelter and therefore the potential consequences for production limiting threats such as neonatal lamb mortality, infectious lameness, mastitis and liver fluke. These challenges can compromise the absolute numbers and efficiency of lambs produced compromising profitability, health, welfare, sustainability and even future flock performance. The costs of these diseases, and the longer term threats posed, such as that of flukicide resistance, will be considered for on-going sheep and beef production.

### **Tim Downes (Organic dairy farmer): Trees provide fodder and boost production**

Tim Downes is an organic dairy farmer based in Shropshire, who has benefitted from the incorporation of trees on his land for some time. His dairy business has 280 spring calving cows and he sells his milk through the Organic Milk Suppliers Co-Operative (OMSCO) and producers milk for the National Organic Program US antibiotic free market. Initially Tim introduced trees on to his land to aid with shelter, soil conditions and water management; and to provide a source of wood fuel. He now believes there are significant benefits to be had in terms of trees providing nutritional and medicinal fodder for his herd. Working in partnership with Harper Adams University and the Woodland Trust he is undertaking a trial to monitor the benefits of cows browsing trees in situ. Benefits can come through three routes; either directly influencing productivity through protein content, through secondary metabolites acting as anti-parasitics and altering digestive processes, or through improved trace element provision.

### **Andy Smith (Bangor University): Enhancing agricultural productivity and ecosystem service resilience in multifunctional landscapes**

Climate change is predicted to increase the occurrence of extreme weather events throughout the UK. Simultaneously the population of the World is expected to grow from 7.2 billion to 9.6 billion by 2050. Such rapid changes to climate, increases in population, urbanisation and environmental degradation represent an unprecedented challenge to food and agricultural systems. Natural resources are necessary to support agriculture and food production, yet research has identified that ecosystem services are being diminished due to loss of ecological complexity in agro-ecosystems. Intensively managed agricultural systems, such as many livestock farms, can become less resilient to extreme events, such as drought or floods, as a result of the erosion of ecosystem functioning. In contrast, the presence of hedgerows and trees in pasture can increase livestock productivity through the provision of shelter, whilst creating a multifunctional landscape where synergies in agricultural or ecological niches may be exploited to sustainably intensify farming practices. Our research aims to identify and promote sustainable agricultural practices and exploit synergies in tree-livestock-soil interactions to increase agricultural productivity and resilience to climate change.

### **Farming for food quality (OF&G) St Nicholas Room (first floor)**

*The aim of this workshop is to look at farming systems with a view to the finished product on the retailer's shelf, and to discuss the importance or otherwise of the impact of farming systems on the food we eat now and in the future.*

**Chair: Steven Jacobs (OF&G)**



### **Geoff Bowles (Ivy House Farm): Soil, grass, cow and milk – a producer's view of health**

Geoff Bowles will present a personal view of his experiences, farming, processing and marketing their organic dairy products.





### Carlo Leifert (NEFG): Effects of organic farming practices on food composition and human health

Recent meta-analyses of published data on the nutritional composition of organic and conventional crops and livestock products have identified substantial and nutritionally relevant differences between organic and conventional crops and livestock products. Organic crops had higher concentrations of a wide range of antioxidants, 50% lower concentrations of the toxic metal cadmium and pesticide residues more than 4 times more frequently found in conventional compared to organic crops. Organic milk and beef were shown to have higher concentrations of omega-3 fatty acids, and organic milk also contained higher levels of conjugated linoleic acid (CLA) and certain antioxidants/vitamin (e.g. carotenoids, vitamin E). The 4 human cohort studies, in which associations between organic food consumption and human health parameters were studied, all focused on the health of mothers and newly-born children or infants. They reported that organic vegetable and/or dairy consumption is associated with a reduced incidence in male genital deformation at birth, eczema in infants and/or pre-eclampsia in mothers. The paper will review the currently available evidence for composition differences and potential health benefits of organic food consumption and the current understanding of the mechanisms responsible.

### Bennan Tong (FiBL): Is organic better?

The production of organic food is, in many ways, fundamentally different from the production of conventional food. With its principles, the organic movement is trying to satisfy all aspects of sustainability. This suggests that we should look for a sustainable diet based on regional, seasonal, eco-friendly and socially-sound food (in terms of production, processing and trading); our wellbeing is affected not only by our eating habits, but also by the way our food is produced. In nutrition and health research, the evaluation of food is often based on the content levels of selected, positively-rated substances. Is organic food distinguished by higher levels of these substances? At least for some of these positively-rated substances, organic food seems to show higher levels than conventional food. The evaluation of well over 300 comparative studies (Baransky et al. 2014) revealed an increase of up to 69 % in the content of certain antioxidants like polyphenols in organic crops. Antioxidants could have a positive impact on health. Organic products need to be authentic and processed with care. Therefore only essential additives and processing aids are allowed and the number and extent of the interventions are reduced to a practical minimum.

**12.30 - 13.30 Lunch in Elements Restaurant (ground floor)**

**13.30 - 15.00 Closing Plenary: Victoria Suite (ground floor)**

## Making change happen globally – how can organic/agroecological approaches deliver?

*Sustainable food production and consumption is now well-established on the global and political agenda. But what does this mean in practice? The Palestinian example demonstrates how even in very challenging political and economic circumstances agroecological practices and organic markets have a role to play. At the UN level, new initiatives have the potential to move the sustainability debate forwards.*

**Chair: Nlc Lampkin (ORC)**

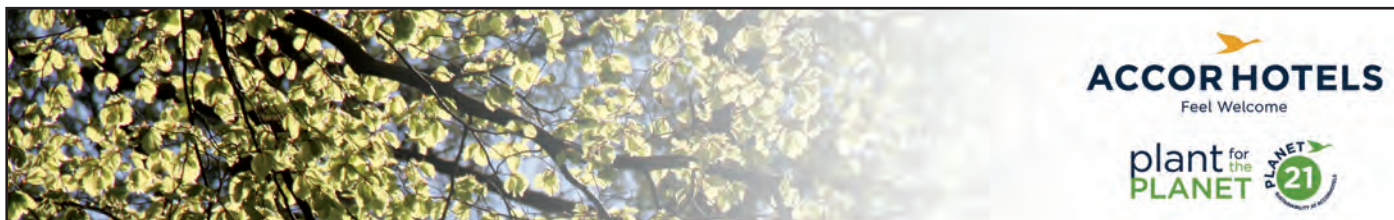
### Dr Samer Jarrar (CORE): Canaan model for a sustainable crop value chain approach in Palestine

The Canaan Model- consists of the Palestine Fair Trade Association (PFTA), Canaan Center for Organic Research and Extension (CORE), and Canaan Fair Trade (CFT) working together in complete synergy and integration for developing entire crop value chains. The PFTA, which is the largest fair trade producers' union in Palestine, consolidates farmers and their production, and facilitates marketing them through fair trade channels. CFT processes, develops and markets farmers' products. CFT contributes to social empowerment and community development programs initiated by the PFTA. The PFTA-CFT model has been named "world model for rural transformation" by the ILO. CORE is a new institution aiming to improve the livelihood of small-scale farmers and their communities through promoting sustainable ecological and organic farming. CORE aims also to scale up the Canaan model and expand its positive impact, through using research and innovation, training and extension, and sharing knowledge and cooperation with local and international partners. The participatory approach that CORE adopted in addressing the almond seed wasp problem, the most serious challenge for almond farmers in the last few years, and the tangible positive results, all that enabled CORE to build real trust and start active and sound collaboration with farmers.

### Charles Arden-Clarke (UNEP): The UN Ten Year Framework of Programmes on Sustainable Consumption and Production.

The presentation will introduce the sustainable food systems programme of the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns (10YFP), adopted by governments at Rio+20. This programme, to be led by the governments of South Africa and Switzerland and two international NGOs (HIVOS and an environment NGO), aims to ensure that "All food systems are sustainable, delivering food security and nutrition for present and future generations". Among the programme work activities are those of: 1) building capacity and enabling conditions for sustainable food systems; and 2) increasing access to knowledge, information and tools to mainstream sustainable consumption and production (SCP) in food systems. Sustainable agriculture is the foundation of any sustainable food system, and there are a number of "integrated approaches" and practices which can be classified as sustainable, including organic, climate smart and conservation agriculture. To secure the volume of sustainable food products for a wide scale shift to sustainable food systems (SFS), researchers, practitioners and advocates of these different systems need to work together. The 10YFP SFS programme, which already includes more than 100 actors, will be reaching out to the sustainable agriculture community to secure your broad and intensive engagement in this global programme.

**15.00 - 15.30 Tea/coffee in Elements Restaurant and Close of Conference**



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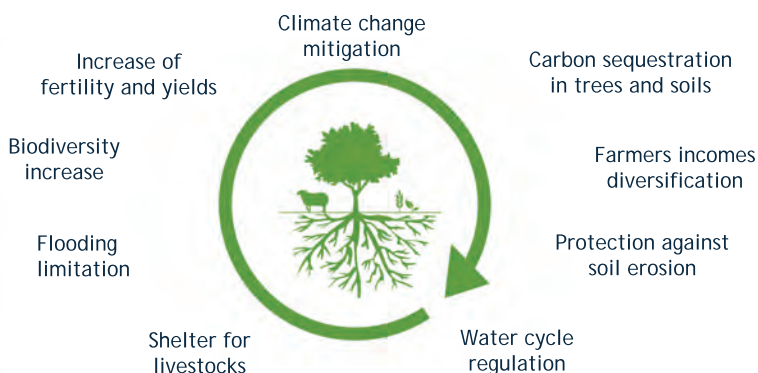
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- 29 innovative farms supported in all the country



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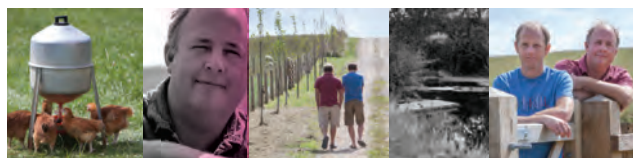
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A Triodos Bank loan helped purchase and install an 11kW turbine at **Wheatland Farm**, Devon which provides an eco-friendly and sustainable holiday base for tourists.



Triodos Bank customer **Jamie's Farm** is a family-run project that supports the development of vulnerable young people by providing opportunities for achievement and wellbeing in an agricultural setting.



A Triodos loan helped Tom Matthey and Mark Sparrow to buy **Haddon Copse Farm**, a 30 acre organic smallholding in the heart of Dorset.

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