Time	Workshop 1	Workshop 2	Workshop 3	Workshop 4	Workshop 5
Wednesday 22nd January 2013					
11.30 – 13.00	**Opening Plenary Delivering real organic values Suites 5/6** (First Floor)				
13.00 – 14.00	**Lunch** in **Suites 2/3** (Ground Floor)				
14:00 – 15.30 Afternoon Workshops 1	**New approaches to arable crop cultivation and cover crops** (organised by ORC/Tilman-ORG) (Suite 4a)	**Organic seeds and breeding for organic growers** (organised by OGA) (Suite 6)	**Greenhouse gas emissions from grassland systems** (organised by SRUC) (Suite 4b)	**Current animal health and welfare issues: management, veterinary advice and tools** (Suite 5c)	**OELS/HLS new options in 2013** (Suite 5de)
15.30 – 16.00	Tea/Coffee break in the Lounge Area (First Floor)				
16:00 – 17.30 Afternoon and Early Evening workshops 2	**GMOs: recent developments and organic breeding alternatives** (Suite 4a)	**Innovations in grower tools and cultivation approaches** (organised by OGA) (Suite 6)	**Soil management for grassland systems** (Suite 4b)	**High organic concentrate feed costs – challenges and solutions** (Suite 5c)	**CAP Reform: latest developments and Defra plans** (Suite 5de)
17.30 – 18.30	Arable research opportunities (4a)	Horticulture research opportunities (6)	Dairy research opportunities (4b)	Beef/sheep research opportunities (5c)	Pig/poultry research opportunities (5de)
19:30 - 24:00	Conference Dinner in Suites 2/3 (Ground Floor) Bar area in Reception (Ground Floor)				
Thursday 23rd January 2013					
09:00 - 10:30 Morning Workshops 3	**Weed control in arable crops** (Organic Arable) (Suite 4a)	**Systems resilience for weather extremes** (OGA) (Suite 6)	**Enhancing biodiversity on dairy farms** (organised with OMSCo and Woodland Trust) **(Suite 4b)**	**Decertification the only option? Acing the financial challenges** (organised by Soil Association) **(Suite 5c)**	**Anaerobic digestion: issues, farm-scale options and digestate use** (Suite 5de)
10.30 – 11.00	Tea/coffee break in Lounge area (Ground Floor)				
11:00 - 12:30 Morning Workshops (cont) 4	**Prohibited product contamination of organic produce** (organised by Organic Arable) (Suite 4a)	**CSAs and other community-based opportunities for professional growers** (organised by OGA and OCW) (Suite 6)	**Pasture-fed for life** (organised by PFLA) (Suite 4b)	**EU Regulation changes – implications for poultry producers** (Suite 5c)	**Making farming more sustainable - nutrients, carbon, public goods. Tools for the job** (organised by IOTA) (Suite 5de)
12.30 – 14.00	Lunch in Suites 2/3 (Ground Floor)				
14.00 – 15.00	**Closing Plenary: The role of sustainable intensification and agroecology in sustainable food security and production** Suites 5/6				
15.00 – 15.30	**Tea/coffee break in Lounge area** (First Floor) **and Close of Main Conference**				
15.30 – 16.30	**Special session: Developing a UK innovation platform for agroecology** Suites 5/6 (First floor)				

7th ORC Organic Producers' Conference:
Making producer-led innovation a reality

Tuesday 22 January 2013

10:00–11:30 Registration

11:30–13:00 OPENING PLENARY

S5/6* Delivering the goods: for the consumer and society

Despite the market and weather challenges, many producers and food businesses remain convinced that there are real benefits to the organic approach, for their businesses and for society.

Nic Lampkin (ORC): Chair

Philip Cook and Becky Jam (Coombe Farm): Building a sustainable organic dairy system with a retailer

We have been involved in organic dairy farming and organic food manufacture for 20 years and our first-hand experience has given us a practical insight to the problems and opportunities. We have worked alongside a major retailer, developed their organic proposition and are responsible for planning to meet future requirements. Having our heritage in traditional Somerset cheesemaking, our history of self-sufficiency and balancing has always been an integral part of our business and organic farming brings values to our farmers and products that we relate to and believe in. The communication of the value of the proposition is a challenge that has not been fully met and will heavily influence the fortunes of the organic sector.

John Pawsey (Shimpling Park Farms): Challenges and benefits of organic production from an arable farmer's perspective

I discuss the agronomic challenges of organic including weeds, diseases and pests of our crops, how we increase and maintain fertility on the farm and some solutions. I question where current organic research is leading us. I also talk about the need to reintroduce livestock into my system to address agronomic pressures. I discuss the challenges of the market as well as marketing and question whether or not we are giving the message that the public wants about what organic farming delivers and suggest that we need strong and new leadership to guide us down that route. I then discuss the real benefits of organic farming, firstly for business including the freedom that farming organically delivers to a business. I then discuss organic benefits for consumers which is based on the feedback we have had from the many farm walks we have had on the farm, and finally I discuss organic benefits to society which focuses on the long term responsibility to our soils

Kate Collyns (Grower): Challenges and benefits of organic production from a grower's perspective

2012 has been an *Annus Horribilis* for many growers: dreadful weather, dreadful slugs, dreadful recession. Organic still seems to be out of favour in the mainstream media too; fortunately many direct customers have stayed loyal and they are the ones who really appreciate the benefits of local, sustainable food. Kate offers her personal account of her experiences as a new grower, and why she believes that 2013 can present organic growers with a number of opportunities.

* Indicates room allocated (S=Suite)

13:00–14:00 Lunch/networking (Suites 2/3)

14:00–15:30 WORKSHOPS 1

S4a New approaches to arable crop cultivation & cover crops

The latest from the TILMAN-ORG project, presenting results from long-term, EU-wide tillage and cover crop trials. An opportunity to consider making changes in the approach on the home farm.

Christophe Davide (ISARA): Chair

Paul Mäder (FiBL): Overview of the TILMAN-ORG project

Reduced tillage and green manures are environmentally friendly practices that increase levels of soil organic matter and biological activity, improve soil stability, and reduce fuel consumption and may mitigate the climate impact of crop production. The avoidance of deep ploughing is successfully practiced as no-tillage agriculture in conventional farming systems. However, these no-tillage systems rely on herbicides for weed control and mineral fertilisers for plant nutrients. As these inputs are banned in organic farming the TILMAN-ORG project focuses on efficient weed management strategies and improvement of nutrient management. Because there is little information on greenhouse gas emissions under reduced tillage in organic farming, greenhouse gas flux studies will shed more light on this challenging issue.

Marion Casagrande (INRA) and Joséphine Peigné (ISARA): Conservation agriculture in organic farming diversity of practices and motivations of European farmers

One of the tasks of the TILMAN-Org project is to assess organic farmers' experiences and perceptions about reduced tillage and green manures. We carried out a survey with around 150 organic farmers that applied at

least two out of the 3 following techniques: no tillage techniques, reduced tillage techniques and green manure techniques in 8 partner countries (Austria, Belgium, Estonia, France, Germany, Italy, Spain, Switzerland and UK). The questionnaire addressed the motivations and major problems when adopting each conservation technique. We also collected data on the detailed crop management of one winter and one spring crop per farm (especially tillage and green manure management). The objectives of the data analysis are to: (i) identify farmers' profiles of motivations and problems, (ii) identify the diversity of practices and their combination in farms depending on country and farm characteristics, and (iii) analyze the relationship between farmers' profiles of motivations and their conservation techniques. The results of our analysis will be presented and discussed during this session. The final perspective of this work is to identify promising techniques for designing new cropping systems for Organic Farming, taking into account soil preservation.

Julia Cooper (Newcastle University):
Using reduced tillage and green manures in organic systems – what is the research telling us?

In the TILMAN-ORG project, results from studies using reduced tillage and green manures in organic systems are currently being compiled. The data is being sourced from both published sources and ongoing field trials. In this talk we will summarize what the data is telling us so far, focussing on the benefits that can be realised from these practices, as well as key challenges associated with reduced tillage and green manures on organic farms.

S6 Organic seeds and breeding for organic growers

This session will report on current developments in research and explore the potential for growing the UK organic seed sector and the development of participatory plant breeding. (Organised by OGA)

Ben Raskin (Soil Association): Chair

Louisa Winkler (ORC):
The latest work on sustainable, organic and low input breeding from the SOLIBAM project

SOLIBAM is an international project developing breeding methods for the organic and low-input sectors. In various ways, it is testing the hypothesis that within-crop diversity can enhance stability and productivity. Louisa will talk about results from two horticultural trials taking place at Wakelyns Agroforestry on a sprouting broccoli population and a French bean landrace-cross. Currently, the legal environment is hostile to the marketing of diversified seed lines. Louisa will briefly talk about the activities underway to try and change this, within SOLIBAM and beyond.

Peter Brinch (Open Pollinated Seeds):
Organic seeds and breeding for organic growers, a participatory approach.

Earlier this year an initiative, 'Organic Seeds by Organic Growers' was started through an introductory seminar at Tolhurst Organics at Hardwick. The proposition with this initiative is to develop a network of organic horticultural seed producers in an effort to broaden the availability of organic seeds with their introduction into the seed market through seed companies who prioritise organic seeds and biodiversity. This initiative also offers an excellent opportunity to improve on open pollinated varieties which have been badly neglected by seed companies for decades. As part of the recently introduced farmer field labs under the Duchy Original Future Farming Programme, the Soil Association, Garden Organic and Open Pollinated seeds UK, are seeking to co-ordinate a project with organic growers for the purposes and aims set out above. We believe the improvement of many open pollinated species is possible given the opportunity and dedication through a participatory approach by growers and facilitators and that this improvement will help to address the widened gap that has been created between open pollinated and F1 hybrid vegetable species.

René Groenen (Biodynamic grower):
Organic seed production

It is not difficult to save your own seeds and to maintain varieties and to do some breeding. What are the obstacles to do so? What is helping you to get you there? By showing how things in practice are done within the "Initiative circle" of biodynamic gardeners in Germany, several themes will be discussed. Out of this "Initiative circle" 2 organisations have been founded: one for the maintenance of already existing varieties, propagation of vegetable seeds and the trade to the market; this organisation is called "Bingenheimer Saatgut". How in practice things are done, from maintenance of varieties and seed propagation on the field till financial conditions. The second organisation ," Kultursaat e. V. ", is founded for the breeding activities for new varieties and for fundamental research for new breeding tools. Here the financial theme is important and off course also the practical work on the field; which breeding methods are fertile?

S4b Greenhouse gas emissions from grassland systems

Grassland farms are sometimes criticised for their levels of greenhouse gas emissions. How real is the problem and how easy is it to take action? (Organised by SRUC)

Christine Watson (Scottish Rural College): Chair

Dave Roberts (SRUC):
Dairy farming systems and the environment

Dave will summarise some of the recent work at SRUC Dairy Research Centre, Crichton Royal Farm Dumfries. Two dairy farming systems were compared between 2003 and 2010 with cattle on high forage and a low forage system. The enteric methane production from the cows on these systems was estimated and cattle on the high forage system produced approximately 25% more methane /litre of milk than the cows on the low forage system. A desk top study was also undertaken which showed that improved silage quality resulted in lower enteric methane production per litre of milk. The effect of soil compaction by machinery and cattle in the autumn on spring grass yield and nitrous oxide emissions has been investigated in an experiment funded by DairyCo. The compaction treatments had an effect on

N2O emissions with the mean tractor compacted plots showing the greater emissions compared to the trampled and control plots (24.5g ha-1 increase compared to the control over the growing season), especially after the first fertiliser application (14.9h ha-1 increase in emissions compared to the control). These experiments and the new dairy farming systems , including one with all feed grown on farm, will be discussed.

Ross Paton (Torr Farm): Practical on-farm measures

I will speak about the experience I've had with the Scottish Government climate change focus farm project. The things which have stood out are not so much energy use but efficiency of resource use and land management especially within an organic context. Efficiency and organics are not contradictory as some would have us believe. The key is not to waste resources and that tight management can make a huge difference to greenhouse gas emissions on farms. Efficient feed use, good soil management, good use of on farm resources are key. Other examples include minimising handling of waste water, thoughtful use of water generally and avoiding pollution. All of these help mitigate greenhouse gas emissions in indirect ways.

John Kay (National Trust): Comparing the carbon footprint of different beef systems

In summer 2012, The National Trust published its "What's your beef?" report as a contribution to the debate on the carbon impact of livestock production. The report was designed to sense-check the carbon accounting that appeared to discredit extensive systems as inefficient – according to calculated kg liveweight gain /kg CO2e. As the vast majority of Trust farms are based on extensive livestock production on land unsuitable for arable cultivation, we sought to check how a selection of our beef farms might compare. Independent consultants compiled the carbon scores from farm visits using standard PAS 2050 methodologies and a desktop comparison of overseas systems, including Brazilian Cerrado and US feedlot. Results from our farms were in line with published results elsewhere. However, when standard carbon sequestration figures were included in the analysis, the carbon balance shifted to favour extensive systems despite their having lower emissions efficiency. Essentially, extensive beef systems have the potential to approach carbon neutrality despite taking longer to reach slaughter than more intensive cereal based systems. We recognise that rates of carbon accumulation and loss are uncertain and we are keen to see routine soil organic carbon testing to check the trends in real situations over time.

S5c Current animal health and welfare issues: management, vet. advice and tools

Animal health continues to be an important topic for livestock farmers with implications for farm productivity and certification. This session will look at on-farm problems from both sides (vet and farmer) and will present the latest developments in welfare assessment from the Assurewel project

Katharine Leach (ORC): Chair

Peter Plate (Vet): Holistic approaches to a range of on-farm problems

Crichel Farm is an organic dairy and arable farm in Dorset, which runs two milking herds of 200 cows each. The high welfare and productivity of the herds is achieved by dedicated herdspersons, close monitoring and quick action taken if needed. Key improvements for animal health and welfare were achieved by crossbreeding (three way crosses of Holstein, Swedish Red and Montbeliarde) and the simple transformation within the old cubicle houses into sand cubicles. Infectious diseases are closely monitored: The herds are BVD and (probably) Johne's free, but constant surveillance and risk based prevention are continuously required to prevent introduction. Lameness and mastitis levels have fallen significantly and fertility is now excellent.

Parasitic problems in youngstock were a feature during the last summer – the wettest in 100 years with parts of the pastures flooded. Targeted medical action according to egg count results was required at certain times, followed by a review of grazing strategies. Fly control in the summer has been successfully achieved using parasitic wasps. The weather also had a significant impact on grazing and forage quantity and quality, and adjusting the diets to minimise condition and yield losses is an ongoing challenge.

Neil Edwards (farmer): Discussions of farm approaches

Neil will review aspects of his farm animal health approach with Peter Plate as his vet

Jessica Stokes (Soil Association): AssureWel: promoting uptake of welfare outcome assessment

AssureWel (www.assurewel.org) ran a workshop at last year's ORC conference (2011) to consult delegates on a) which outcome measures were considered necessary to assess dairy welfare and b) how to use welfare outcome assessment to promote actions to improve welfare where necessary. Delegates identified that: the relationship between the assessor and farmer; assessor knowledge; and training to encourage uptake of the approach as a routine management tool are key to promote welfare improvement. Key measures highlighted include response to stockperson, dirtiness, broken tails, body condition, heifer survivability and cull and casualty cows, and mobility as an individual and herd management measure.

Over the past year, AssureWel has been working closely with Red Tractor Assurance (RTA) Dairy Scheme to pilot and finalise across scheme protocols. In summer 2012, Soil Association and RSPCA have trained and embedded the approach within their scheme assessments. Two forums (May and October, 2012) were held to consult and engage with industry stakeholders to ensure a joined up strategy and roll out of the approach led by DairyCo, and this work is on-going. This workshop will update delegates on progress and plans for the approach going forward. It also includes a discussion and feedback session with a Soil Association licensee who has recently undergone an assessment at annual inspection; demonstrating the on farm benefits that this approach offers in providing immediate animal focussed feedback, discussion and support where necessary.

S5de OELS/OHLS new options in 2013

Several changes have been made to the English Environmental Stewardship scheme with some options downgraded, others improved and some new ones of high relevance to organic producers. This session will explore the changes and the opportunities for OELS and OHLS participants.

Peter Melchett (Soil Association): Chair

Steve Bellingham (Natural England): Overview of the scheme changes

In January 2013 several changes were made to Environmental Stewardship. They are primarily changes to Entry Level Stewardship and Organic Entry Level Stewardship. These include the introduction of five new options, rebalancing of option points and some changes to prescriptions. Why have these changes come about? Research and monitoring has identified that ELS in particular was not delivering the level of environmental benefits possible. Several studies, plus stakeholder consultation identified particular options that needed to be modified to deliver more. A range of means for improving effectiveness, for example re-balancing points between options were looked at. Ministerial approval led to these changes. These changes affect all ELS, OELS, HLS and OHLS agreements which start on 1st January 2013 or later. Four of the new options can also be included into existing agreements. We will cover the reasons for the changes to the schemes, the changes themselves and how to amend existing agreements.

Alison Smyth (Abacus): Making use of the new options creatively to support your organic system

The Organic Entry Level Scheme (OELS) has been tweeked! Essentially it's the same scheme we've all come to know but the changes are significant, particularly if your OELS agreement is coming up for renewal or you are entering for the first time having recently come out of a 'Classic Scheme' such as ESA or CSS. Designed to be simple for farmers to enter, OELS started with various objectives which resulted in a handbook nearly an inch thick. Over the years the scheme has had a number of incarnations to refine the objectives and develop the management prescriptions. However this fourth edition handbook is now much more weighted towards delivering biodiversity benefits. There are new options; point changes – some have gone up and some have gone down. There is guidance on priority options for your local area and numerous options that can assist the organic farmer in developing a sound, living, balanced farmed environment.

Caroline Corsie (Lower Smite Farm): What's the wildlife benefit and impact on my management regimes?

Lower Smite Farm, owned by Worcestershire Wildlife Trust is a 65ha mixed arable livestock farm. The entire holding has been is in an OELS/ELS/HLS agreement since 2010. The farm has 5 UK Biodiversity Action Plan (BAP) priority habitats and 15 BAP species including brown hare, skylark, great crested newt and brown long-eared bats. Rebuilding soil health is seen as fundamental to restoring wildlife populations. Over half the farm is now in the second year of full organic management producing a range of hay, forage (from various temporary green manures) and cereals. There are newly planted soft fruit and lavender beds and a recently launched Hereford beef box scheme in partnership with a grazier. The farm is pre-paring to dovetail in new agri-environment options into the existing rotation, including: supplementary feeding of farmland birds (OF23); temporary legume and herb rich swards (OK21 by over-seeding); ryegrass seed-set for winter/spring bird food (OK20) and the new hedgerow restoration option (OB14).

15:30–16:00 Refreshments (Lounge Area, First Floor)

16:00–17:30 WORKSHOPS 2

S4a GMOs: recent developments & organic breeding alternatives

The recent GM wheat trial has raised familiar issues and re-awakened concerns in many people. This session will consider the trial and other developments and place them in a context of political inappropriateness. A key part of the session will be the presentation of viable alternative approaches.

Bruce Pearce (ORC): Chair

Pete Riley (GM Freeze): Overview of recent developments and challenges

Predictions of future food crisis brought about by worsening climate change, more people and dwindling supplies of non-renewable resources have resulted in resurgence in the promotion of GM crops as a solution. This presentation looks at what is in the pipeline for development and some of the politics behind the current push to rehabilitate GM crops in the UK and Europe. Where do the UK governments stand? And whatever happened to Monsanto? Finally possibly significant events in 2013 will be summarised and priorities for action emphasised.

Lawrence Woodward (GM Education): What is wrong with GM in research terms and politically

An energetic and unprincipled push is currently underway by the UK government and research establishment to foist GM technology on a wary and sceptical public. Whatever merit GMOs might have, the claims being made for it are over exaggerated and the risks understated by politicians and pro-GM researchers. The media are largely unquestioning. Alternatives to GM do exist but are being ignored. This presentation will review these issues and using the GM wheat trial at Rothamsted highlight how organic and agro-ecological alternatives are being side-lined.

Thomas Döring (ORC): Alternative approaches and lessons from ORC research

Plant breeding, while being a key area of agricultural activities, can only make limited contributions to solving

complex agricultural problems. When focussing on the functions that plant breeding aims to deliver it becomes evident that many options of agricultural management might have higher potential than plant breeding and the mere selection of specific plant genotypes. Taking the goal of low aphid infestation in cereals as an example, I will show that there are plenty of well researched management options besides plant breeding that can tackle this problem in a successful way. As a further example of alternatives to plant breeding, I show how the approach of engineering communities, i.e. the targeted usage and combination of plant traits in a dynamic and diverse plant community can deliver multiple services in an agro-ecosystem. Finally, I highlight plant breeding approaches using conventional crossing methods that are able address the increasingly important problem of coping with changing and fluctuating environments. Here as in other areas, diversification proves to be a key to resilient agricultural production.

S6 Innovations in grower tools and cultivation approaches

Featuring a range of innovative tools and ideas as well as showing how to modify old kit. Discussion topics will include relevance and practicality of the innovations presented. (Organised by OGA)

Alan Schofield (Organic Growers Alliance): Chair

Video shorts: Innovations from the USA

These two short video presentations will set the scene for the innovative machinery workshop session. The first features Eliot Coleman himself explaining why he felt it necessary to develop his own tools, equipment and systems. The second will feature the Japanese paper pot transplant system as an example of innovation that can really make a difference in the right situation.

Roger Hitchings (ORC): Eliot Coleman's approach to tools and equipment

This talk will introduce a number of innovative approaches to small-scale production developed by that most respected of organic growers, Eliot Coleman. The talk will be illustrated by a series of photographs taken during visits by ORC staff to Four Season Farm. Questions for discussion include whether such innovations are widely applicable and do they have the potential to stimulate further innovation.

Iain Tolhurst (Tolhurst Organic Growers): Innovations in growers' tools

Since the dawn of mankind we have been developing tools, the very first ones were directly related to food production or food procurement. The development of tools for humans was unique in the animal kingdom; having fingers and an opposing thumb gave us fantastic dexterity, tools gave us the ability to exercise increasingly our control over our environment and led to huge increases in food production and hence population growth. The latter is a clear illustration as to how successful mankind has become and we are now faced with the danger of becoming a victim of that success.

Growers tend to be practical people and organic ones no less so, we have all made or adapted a specific piece of kit for a particular task at some time. My presentation will look at tools for growers that can be easily and cheaply produced on farm or locally, tools that are for specific purposes either to speed up jobs or to take out some of the graft that may be needed. Working hand in hand with tools is the development of systems; these are often as a result of tool development or as a direct need for finding a solution to a new problem brought about by mechanisation. I will be drawing upon examples of the way tools are used and developed at Hardwick on our farm and in the gardens.

S4b Soil management for grassland systems

Soil quality and condition is vitally important in grassland farming. There are fewer opportunities for physical intervention compared to cropping systems but much can be done without resorting to the plough. This session will present a range of approaches to address grassland soil problems.

Mark Measures (IOTA/ORC): Chair

Heather McCalman (IBERS): PROSOIL – 2 years on

The concept that the quality of agricultural food products is based on the health of the soil is central to organic farming. Working with key industry stakeholders and farmers, the PROSOIL project aims to achieve a better understanding of soil management to optimise farm productivity. Linked to IBERS research that is scientifically determining the impact of improving soil health on forage and livestock productivity and quality, the farmer participation is a key part of the dissemination. At IBERS, plot and field work is evaluating a range of soil management methods to improve soil health. Eight Commercial Development Farmers (CDF), who volunteered during a series of events, are working with IBERS Grassland Development Centre (GDC) to explore the effects of their farming practices on soil health and productivity by making field-scale measurements of soils, forage yield , quality and, where possible, animal performance. The farms represent different sectors of agriculture, soil types and climatic conditions and an organic upland farm is included. Project activity on CDFs is based on soil analyses and recommendations from RB209 and a Base Cation Saturation Ratio approach to soil nutrient management, as well as another soil improvement method chosen by the farmer. Data and information is collated by IBERS GDC, interpreted in a practical context and shared widely during open days, discussion group meetings, newsletters and topical factsheets. The network of farmers meets at IBERS to discuss key 'PROSOIL' issues' and to share knowledge and experience. Early physical results from the farms and their views on the project to date will be presented.

Jon Wilson (Holt Farms, Yeo Valley): Practical soil management and role of soil analysis

Holt Farms comprises 500 ha of land split between the heavier clay loam soils of land adjacent the Blagdon Reservoir and the droughty brash soils 700 feet up in the Mendips. We keep 420 pedigree British Friesian cows in two herds. Soil management has been a challenge on

these difficult soils, good soil structure has been difficult to maintain on the clays and the brash soils are of inherently low fertility. Organic farming necessitated a move away from the historically high conventional inputs of both P and K and required an approach which relies more on ensuring better soil structure, good biological activity and improved availability of nutrients. Using the Thompson and Joseph soil analysis and Ground Level Nutrition advice, both based on the Albrecht analysis and approach to soil management, we have focused on improving soil structure, through the use of gypsum kieserite and soil aeration. We have been able to maintain satisfactory forage stocking rates of 1.4 LU/ha. Cow health has been maintained since converting to organic farming, which may also be linked to our soil management.

Elizabeth Stockdale (University of Newcastle): Supporting soil biota in grassland systems - learning from practice

In 2011, Elizabeth Stockdale led a Natural England project involving farmers and growers across the UK combining literature review with farmer workshops to allow the evaluation of a range of different farming practices with the potential to deliver benefits through the soil biota, looking at the likely mechanisms, benefits, and practical constraints and opportunities for farming systems. This talk will summarise the key findings for grassland management. The project considered both systems-oriented approaches (involving management changes across the whole farm), and "point interventions", which are usually short-term and target specific aspects of the soil biota or their environment. The project identified three general principles that are most likely to deliver benefits through the soil biota: increase OM inputs to soil; increase diversity of aboveground plant species; and reduce tillage intensity.

In livestock systems, on-farm management changes to manure handling with reduced direct use of slurry and more on-farm composting provide an opportunity to enhance soil biota, mainly through reduced negative impacts of slurry application. In addition, increased species diversity in swards can bring a number of benefits not only linked to the support of soil biota.

S5c High organic concentrate feed costs: challenges and solutions

This session seeks to de-mystify the costs of feeding concentrates and to present viable alternatives. Adaptation is a key strategy element in dealing with current problems.

Chair TBC

Susanne Padel (ORC): The real significance of feed costs to costs of production

The presentation will draw on an evaluation of the long term financial trends of organic livestock producers compared with conventional based on farm-business survey data. Whilst the standards and principles of organic farming state that feeding strategy should rely as much as possible on feed from the holding this is not necessarily the case. For lowland dairy concentrate feed costs have risen since 2007/08 to on average more than 25% total business costs of milk production, whereas for beef and sheep farms purchased concentrate has also risen but is overall less important. An exploratory analysis of dairy costing data carried out as part of the SOLID project confirms milk from forages as a key performance indicator for organic milk production. It shows that five farms performing well in terms of milk from forage seem all convinced that grazing management is important.

Graham Vallis (Producer): Strategies to reduce concentrate use in milk production

'Organic farming is easy – it's making a living from dairy farming that is difficult.' A low cost, low risk farming system is more robust where grazed grass, the cornerstone of dairying serves the purpose best.

Becky Nelder (ORC): An introduction to the ICOPP project - improved contribution of local feed to support 100% organic feed supply to pigs/poultry

A key challenge in improving the sustainability of organic monogastric production is meeting the required levels of nutrients from locally sourced organic feeds. Organic pig and poultry systems have been allowed a derogation from the EU Organic Regulatory Board to include up to 5% non-organic feed within their rations. After an extension of 3 years, this derogation will finish at the end of December 2014. From then on all producers will be required to feed monogastric animals a 100% organic diet. The derogation has been extended until the end of 2014 but it is inevitable that producers will be required to shift to a 100% organic diet. There is however, very little experience and limited information on the implications of a shift in feeding strategy to 100% organic for monogastric production, animal health and welfare and sustainability. The ICOPP project is a collaboration of 15 partners across 10 European countries, financed through CORE Organic 2. It will bring together an extended knowledge of different local feeds and their wider impact on growth, health and welfare and the environment to identify feeding strategies which comply with organic principles. The aim is to produce economically profitable feeding strategies based on 100% organic feed across Europe, which will supply poultry and pigs the required level of nutrients in different phases of production and support high animal health

S5de CAP Reform: Latest developments and Defra implementation plans

The CAP Reform plans are slowly taking shape, with budgetary decisions affecting possible future options. Implementation may however be delayed until 2015 and uncertainty surrounds the transition process. This session will provide an update on recent CAP reform developments and examine the implications for UK organic support.

Nic Lampkin (ORC): Chair

Christopher Stopes (IFOAM EU Group): CAP reform from the perspective of EU organic/environmental movements

With 27 member states, a diverse organic sector and many environmental and civil society NGOs, there is no

single European organic perspective on CAP reform. Each country has its own priorities. The enthusiasm for exploiting the organic opportunity varies amongst governments. ARC 2020, a coalition of civil society organisations and environmental NGOs such as Birdlife, EEB, FOE, PAN and WWF are all working closely with the IFOAM EU Group to lobby for real greening of Pillar 1 and for mandatory inclusion of organic under Pillar 2 Rural Development Programmes. Making the CAP more joined-up, linking Horizon 2020, the European Innovation Strategy and the Cohesion Policy is a priority; multifunctional organic systems could contribute to success. Member states' Partnership Agreements should outline how synergy is to be achieved. They will provide the framework for enabling organic food and farming to flourish. Denmark includes organic as part of their strategy for green growth and to ensure water quality; in Austria organic in CAP is a priority under their organic action plan. In both countries the organic sector is effectively engaged. There are important lessons that the UK could learn from other countries in Europe – are we doing as well as we could?

Rob Macklin (National Trust): Implementing CAP reform in the UK – key issues

NB: This presentation will not be made due to illness, but the abstract and report mentioned is still relevant.

The CAP has a huge influence on the economic viability of the National Trust's farmed estate spanning 200,000 ha across England, Wales and Northern Ireland. 90% of this land is farmed by 1,500 tenants. The remaining 20,000 ha is managed in-hand by staff and graziers across 350 separate sites.

The principle of greening measures across Europe is welcome, but in reality the specific measures of permanent pasture, crop diversity and ecological focus areas for pillar 1 are unlikely to deliver substantial environmental change in the UK as farming practices here already deliver most of the criteria demanded.

For the majority of our farms the key concern is not the greening measures in pillar 1, but the future availability of pillar 2 rural development funds for agri-environment schemes. National Trust has commissioned a report with Co-operative Farms to recommend opportunities for an evolved agri-environment scheme in England, 'ELS+' that could succeed the current ELS and upland ELS schemes and potentially deliver greater public benefit and improved environmental outcomes. Our joint report, Land Stewardship in England Post-2013 was launched in mid-December has already been shared with government agencies, politicians, farming and environmental organisations as a positive contribution to CAP reform in the UK.

Kevin Ruston (Defra): Defra's preliminary plans for organic support in England after CAP reform

Defra leads across Government on the European Commission's proposals for reform of the Common Agricultural Policy post 2013. This includes the Commission's draft Rural Development Regulation and the draft Direct Payments Regulation. The UK's Rural Development Programme for England (RDPE), which is being reviewed as part of the UK's approach to CAP reform, is the main mechanism through which financial support is provided in England to a range of agri-environment and land management schemes, including Organic Entry Level Stewardship (OELS). The Government has made clear its view that there should be a smaller, simpler and greener CAP. EU Budget negotiations are also ongoing. Against this backdrop, and matters such as the Commission's proposals for Greening of Pillar 1 of CAP, Defra is considering how future support for organic farmers might be structured. This session will review the evidence base on OELS and report on emerging options and ideas for supporting organic farming approaches in England.

17:30–18:30 Small Group Meetings (space for more in Bar!)

Participatory research opportunities

As part of ORC's initiative to support producer-led innovation through a Participatory Research Network linked to the Duchy Originals Future Farming Programme (see separate leaflet in conference pack for details of both initiatives), a series of meetings with interested producers is being organised with the aim of identifying relevant projects to take forward and potential research partners and funding sources.

S4a **Arable**
Facilitated by Nick Fradgely

S6a **Horticulture**
Facilitated by Anja Vieweger

S4b **Dairy**
Facilitated by Katharine Leach

S5de **Pigs/poultry**
Facilitated by Becky Nelder

S5c **Beef/sheep**
Facilitated by Mark Measures

S6b **Via Campesina UK (led by Adam Payne)**

La Via Campesina was founded in 1993 to campaign for the rights of small-scale and traditional producers. Today the organisation represents over 200 million farmers, growers, pastoralists and fisherfolk worldwide. Until now the only member organisation in the UK has been the Scottish Crofting Federation. There are now plans afoot to establish Via Campesina UK as a producer led membership organisation that will identify and organise campaigns and lobby UK and European parliaments on issues affecting the livelihoods of small-scale producers. The organisation is in its early stages with the first AGM planned for the 3rd March. At this stage the shape of the organisation is flexible, and it is important that it takes a broad base and builds on the experiences of other organisations. Come along to discuss.

19:30–24:00 Conference Dinner and Bar

WEDNESDAY 23 JANUARY 2013
09:00–10:30 WORKSHOPS 3

S4a Weed control in arable crops

Weed control in organic agriculture does not depend on a single strike approach. It is much more effective to consider weed control at every stage of the crop production process. This session uses the idea of 'Many Little Hammers' to illustrate this approach before looking at two of the 'little hammers' in more detail. (Organised by Organic Arable)

Andrew Trump (Organic Arable): Chair

Andrew Trump (Organic Arable): Many little hammers – the idea

Andrew Trump will introduce the idea of 'Many Little Hammers' to weed control, i.e. that we need several different approaches to weed control within our farming systems in order to manage weeds effectively.

Jonathan Storkey and David Brooks (Rothamsted): Many little hammers – hitting where it hurts!

Farmers managing conventional systems have come to rely on herbicides almost exclusively as their means of weed control. In contrast to the big 'one-hit' of chemical control, however, organic systems must employ an ecological approach that uses a range cultural control options to exploit points of weakness in the weed life cycle. This has been described as the 'many little hammers' approach. Increasingly, these ideas are also being incorporated into conventional systems to combat the spread of herbicide resistance. Because of differences in the ecology and traits of different weed species, any given management scenario will select positively for some species and negatively for others. Using the example of wild oats, the important traits or characteristics of weeds in terms of identifying opportunities for control will be discussed in the context of developing sustainable weed management strategies.

John Pawsey (Shimpling Park Farms Ltd): Managing winter wild oats

I discuss the financial implications of wild oats on an organic farm, existing methods and then a new approach using weed surfers. I show two years' worth of evidence showing how quickly wild oat seeds become after flowering. I then discuss the results from our management of the weed, development of the weed surfers and then conclusions of the work we have done to date.

S6 Systems resilience for weather extremes

Weather extremes are tending to become the norm. Vegetable production is a tough job at the best of times so it is becoming more important to plan for extremes by modifying production systems to be more resilient. (Organised by OGA)

Roger Hitchings (ORC): Chair

Sam Eglinton (Garden Farm Produce): Energy flow in ecosystems: improving yields and profitability

Nutrients, carbon and water are all cyclical and understanding of ecosystems in organic production has rightly focused on these cycles. However the energy that makes these cycles possible is not cyclical but linear and substantial amounts (up to 90%) are lost as heat through metabolism as it passes through each level of the ecosystem. This presentation looks at how to increase the amount of energy captured by the agro-ecosystem through the use of green manures and intercropping to improve yields and profitability through improving the functioning of the agro-ecosystem itself.

Martin Wolfe (ORC): Moderating extremes using agroforestry

Integrating trees into a horticultural system using an eco-agroforestry approach can buffer vegetable production from extremes in an unpredictable climate. Trees modify microclimatic conditions including temperature, water vapour content and wind speed, which can have beneficial effects on crop growth. Reducing wind speeds in the protected area can reduce evaporative stress, evapotranspiration, soil erosion and improve crop water use efficiency.

Planting trees into horticultural land obviously reduces the area available for vegetables. However, improvements in microclimate, nutrient cycling and soil carbon can improve yields to help offset the diminished cropping area. To obtain such gains requires appropriate management of the tree element to avoid negative effects of competition for light, water and nutrients. In addition the trees need to be productive in their own right, for example, by including fruit and nut trees and bushes, specimen trees or other high value wood products, timber trees and/or short rotation coppice.

Eco-agroforestry can also increase system resilience by diversifying the system – diversification can reduce pest and disease impacts as well as produce a wider range of outputs (e.g. top fruit, soft fruit, timber or bioenergy as well as vegetables). Furthermore, by providing a range of habitats, agroforestry can support higher levels of biodiversity, which again increases system resilience when bad weather impacts on important species such as honey or bumblebees. The potential for eco-agroforestry including horticulture will be discussed in the context of the various agroforestry systems at Wakelyns in Suffolk.

Iain Tolhurst (Tolhurst Organic Produce): How to create a resilient system

The fact that we are facing a change of climate is clear to just about everybody, what is not clear is exactly what that change will be. There are many theories all based on various interpretations of scientific studies done over the past two decades, but as yet there is no universal scenario emerging. This makes planning our agricultural strategy for the future especially challenging. We need to be prepared for varying degrees of climatic pressures on our food production systems; changing an agricultural system is not something that can be done from one

season to the next. So long term planning is needed, coupled with various contingency plans in case things do not work out the way we had hoped.

I would like to think that I would be possible for me to give a clear direction as to how we are to build resilience into our food production systems, but I am not able to, it will take a concerted effort for agriculturalists to come up with such plans. The organic producer I know is in a far better position to bring about a change to resilience but we are up against the GM lobby who think they can design their way out of trouble. GM is likely to be a far greater threat than climate change to the resilience of our agricultural systems, because it will lead to complacency and that is a very dangerous thing. What I will be presenting will be the possibilities that exist to develop robust systems able to resist difficult climatic conditions but still able to deliver an ample supply of food. This change will be based on a "systems approach" and will inevitably mean a very big change in the way we grow, harvest and distribute food in the future.

S4b Enhancing biodiversity on dairy farms

There is an increasing level of interest from dairy farmers in how to increase biodiversity levels on their farms. This session looks at trees on farms and at biodiversity in the sward, and will provide guidance on biodiversity improvement. (Organised with OMSCo and Woodland Trust)

Jo Smith (ORC): Chair

Mike Townsend (Woodland Trust): Trees on livestock farms

Recent years have seen increasing focus on food security, and growing pressure for more domestic food production. At the same time there is recognition that nature is fundamental to the delivery of 'ecosystem services'. For agricultural production this means healthy soils, pollinating insects, climate regulation, and plentiful and clean water. But farming also has an impact on wider ecosystem services for society, including maintaining water quality, mitigating flooding, and supporting biodiversity. The development of sustainable agriculture depends on increasing production, whilst maintaining and improving the condition of the natural environment. Thoughtful integration of trees and other natural elements into farming systems can support production and deliver benefits which make sense at a farm scale, whilst also delivering wider public goods. In particular trees can help in reducing heat stress, improving shelter, particularly for young stock, and support productive pasture growth. Through reducing soil erosion, and intercepting runoff, trees help conserve soil resources while improving water quality and reducing flood risk. In addition trees and woodland can provide woodfuel, support wildlife and add to the amenity of the farm.

Henry Edmunds (Cholderton Estate)

Henry Edmunds, who won the RSPB/Telegraph Nature of Farming Award in 2012, has had to withdraw for family reasons. Aspects of his presentation and achievements will be reflected in the presentation by Gethin Davies.

Gethin Davies (RSPB): The *nature* of dairy farming

While there is considerable awareness of the declines in farmland wildlife in arable systems, the pastoral regions of the north and west of the UK have also seen many species dependant on farming decline in range and number. Studies have shown clear benefits for wildlife from organic arable cropping over conventional management, but there is not comparable evidence for organic grassland management. Organic principles are a helpful foundation for wildlife, but there is scope for carefully targeted management to provide considerable additional benefit. Two areas to focus on in helping farmland wildlife include:

1) Boosting the availability of insects within grassland - Modern grassland management rarely allows plants to go to seed or key insects to complete lifecycles, diminishing these early links in the food chain. Greater diversity in plant species and structure in grassland are key to boosting insects. Legumes offer an opportunity to provide pollen and nectar, and food plants for insects, but require management practices that allow extended periods without grazing or mowing.

2)Providing winter seed food - Many farmland birds depend on seed food, especially in winter. This is mainly provided through arable cropping, such as weedy brassica/root crops and stubbles. Alternatives ways of providing seeds include 'wild bird seed mixes' or 'seeding ryegrass'.

S5c Decertification the only option? Facing current financial challenges

Times are tough, demand is down and costs are higher, but is de-certification the way out? Are organic farms really performing badly financially? The reality is often different as a new financial report from the Soil Association and ORC (in preparation) and an in-depth look at arable and dairy costs show. (Organised by Soil Association)

Simon Crichton (Triodos Bank): Chair

Nic Lampkin (ORC): How does organic really compare with conventional in financial terms?

For more than 15 years, Defra has funded the collection of data on organic farm incomes, published annually as a report by Aberystwyth University, and used to support the costings data published in the Organic Farm Management Handbook. We have analysed the trends for the last five years as part of a report to be published by the Soil Association and ORC in Spring 2013. These results show that in general, organic farms remain competitive with similar conventional farms, and that incomes have held up better than might have been expected given the tough market conditions following the recession. However, some particular sectors are facing real difficulties. Price premiums alone do not tell the full story and should not form the basis of a decision to stay organic or revert back to conventional.

William Waterfield (Consultant): Arable input costs

The grass is not always greener on the other side of the fence. Increased headline prices in the conventional arable sector should not be confused with improved profitability or that the conventional sector offers better prospects of improved profitability. Improving the financial performance of organic arable systems requires growers to develop robust systems that can maintain levels of fertility and crop yield and hence profitability. The paper will examine key elements in the cost structure on organic farmers and highlight ways in which growers can improve their profitability. The impact of yield will be considered as a means of improving returns for organic farms. The prospects for input costs in the conventional sector will also be considered.

Geoffrey Sayers(Carswell Farms/Well Hung Meat): Financial realities on the farm

Questioning the economics of organic production has been at the heart of my expansion over the past 10 years. Despite a deep belief that organic production is better in terms of animal health and natural productivity of land and livestock and a feeling that it delivers a better product to my consumer I am a businessman and must ensure I maintain a profitable farming business. Each time I expand I ask myself whether I should convert the farm in question, and to date I have said yes. However, in the current economic climate the gap is closing meaning that many farmers either discount the thought of conversion or are dropping out. But I feel that there is still a strong economic case for production with consumers and some supermarkets coming back to organic products and it is some of the more subtle parts of the production system that must not be overlooked when choosing the right path for your farming business. So I factor in the longevity of my cows, meaning lower replacement costs. The ability to produce milk from grass, lowering my exposure to external feed costs which are outside of my control. As well as improved animal health and as such lower vets bills. So whilst it is getting harder financially to stay with my belief that organic production is better for the environment to date, I have always chosen to keep my whole herd organic.

S5de Anaerobic digestion: farm-scale options & digestate use

Anaerobic digestion continues to invite interest and comment with larger scale systems tending to show greater promise. This session will report on developments in small-scale systems and the role of AD in nutrient cycling.

Laurence Smith (ORC) Chair:

Dr Kurt Möller (University of Hohenheim): Effects of AD on nutrient cycles and availability

The trend towards specialization in conventional farming led to large agricultural areas in Germany and in Europe lacking livestock. Also stockless organic farming has increased during recent years. In organic farming clover/grass-ley (CG) provides nitrogen (N) to the whole cropping system via symbiotic N_2 fixation and also controls certain weeds. A common practice in organic farming, when ruminants are not present, is to leave the biomass from CG in the field for their residual fertility effect. CG biomass, crop residues (CR) and cover crops (CC) represent a large unexploited energy potential. It could be used by anaerobic digestion to produce biogas. In the presentation, the results of a field experiment carried out by implementing a whole cropping system with a typical crop rotation for such farming systems on the research station Gladbacherhof will be presented. The crop rotation consisted of six crops (two legumes and four non-legume crops). The aim was to evaluate whether the use of N could be improved by processing biomass from CG, CR and CC in a biogas digester and using the effluents as a fertilizer, compared to common practice. Results indicate that digestion of CG, CR and CC can increase the crop dry matter and N yields and the N content of wheat grains in organic stockless systems. Harvesting and digestion of residues and their reallocation after digestion resulted in a better and more even allocation of N within the whole crop rotation, in a higher N input via N_2 fixation and lower N losses due to emissions and probably in a higher N availability of digested manures in comparison to the same amounts of undigested biomass. Similar results were obtained also in a similar approach carried out in Sweden. A short presentation of available data on potential effects of anaerobic digestion on soil humus budgets is included.

Dr Clare Lukehurst (Task 37): Small-scale farm anaerobic digestion

The final draft of the International Energy Agency Bioenergy Task 37 'Energy from biogas and landfill' brochure is due for for publication in April 2013. The objectives of the brochure are: to illustrate existing technologies for small-scale plants & possibilities to reduce investment costs; to consider the necessary and favourable framework conditions; and to demonstrate management and operational practices to improve economic viability. A 100- cow dairy herd is used as a basis for the discussion and the examples cited and comparisons made between livestock manure, the additions of crops and food waste as the basis for economic viability. These are illustrated by case studies from Northern Ireland, Brazil and Finland. The brochure also addresses the under valuation of farm scale AD in its contribution to GHG and nitrate emission reduction for which there is no recognition in economic terms or incentives. The authors are preparing a list of companies that can offer small scale applications (<10kWe- 100 kWe) on www.iea-biogas.net as well as a section of case studies also for the web site.

Richard Tomlinson (Calon Wen): On-farm AD: a farmer's experience

Richard will be covering the following areas: obstructions in construction; operations & maintenance; benefits to the farming business; does it pay?

10:30–11:00 Refreshments (Lounge Area, Ground Floor)

11:00–12:30 WORKSHOPS 4

S4a Prohibited product contamination of organic cereals

Pesticide contamination of organic cereals and other arable crops can be devastating. Crops can lose their organic status and may be difficult to sell. This session will examine proposed reforms and protocols and their potential impact on producers and the supply chain. (Organised by Organic Arable)

Bruce Pearce (ORC): Chair

Lawrence Woodward (Whole Organic Plus): The limitations of the proposed reforms and impacts on producers

This presentation will review the actual situation (as opposed to the politically biased one) of pesticide residue contamination of organic foods in the UK and the EU. It will examine how the systems developed by certification bodies and proposed by Defra are problematic for organic cereal farmers and will undermine the organic regulation. The issue of GM contamination will also be briefly looked at.

James Winpenny (Defra): Initial responses to the Defra Consultation on Defra's Proposed Protocols

Over the years there have been cases of substances that are not permitted in organic production being detected in organic products. The EU organic Regulations provide little guidance on the procedures that should be adopted when testing for such substances and the actions that should be taken where they are detected. Defra wishes to produce guidance for UK organic Control Bodies and for operators on the procedures for testing products for prohibited substances so that a clear and consistent approach towards testing is adopted across the UK. This includes guidance on when organic products may be tested, the types of testing that may be undertaken, the procedures for taking samples, the procedures that should be followed where a prohibited substance is detected and the exchange of information between different parties. A public consultation on draft guidance for operators and organic Control Bodies was launched in September 2012 and closed on 21 December 2012. Defra is in the process of considering the responses and will factor these in when making a final decision on the guidance.

Richard Jacobs (OF&G): Prohibited product contamination of organic produce (with reference to the cereal sector) – A certifiers perspective

The organic certifiers occupy a unique position in the organic food landscape. Through their certification services they provide the opportunity for businesses to trade their organic products. Certifiers have to ensure that their registered operators are compliant with the standards and that the inspection and certification system is robust, fair and thorough. Certifiers also have a role in protecting genuine organic producers, and consumers of organic foods, from rogue traders and those with poor management practices that could lead to organic product becoming contaminated with prohibited substances. It is essential that in order to maintain the integrity of the organic certification system, and the public's trust in that system, that the certifiers are not restricted in their actions, particularly when it comes to testing products for prohibited substances. Defra are currently trying to limit the testing activity of the certifiers and whilst we recognise that testing is only a tool to use in some circumstances, it is an extremely useful tool and should not be restricted in any way.

S6 CSAs & other community-based opportunities for growers

CSAs can take several forms but essentially they are either community-led or grower-led. A look at how grower-led CSAs work and what advantages they can bring to an organic vegetable business. (Organised by OGA and OCW)

Phil Sumption (Garden Organic): Chair

Roger Hitchings (ORC): CSA survival guide

The Better Organic Business Links (BOBL) project has been working with every link in the supply chain in Wales to create opportunities for producers and to provide them with the tools to improve business performance. One element is support for what is a relatively embryonic CSA sector in Wales. This presentation will launch the draft report from this project as well as introducing a survival guide for CSAs.

Ben Raskin (Soil Association): Grower led CSAs in England

Ben will give a resumé of the Soil Association report on CSAs in England carried out as part of their 4 year project. In particular opportunities to get closer to you market and build loyalty and connections with those that consume the food we produce, as well as looking at what motivates members to get involved in CSAs.

Mike Westrip (Rhos Market Garden): A growing experience of community support

In 2008 Alice and I began to establish a market garden in the Welsh Marches 850ft above sea level. Five years later the enterprise has established two weekly market stalls plus a veg bag scheme of 40 plus. We also supply a number of local restaurants and caterers, as well as an organic shop in Ludlow with our surpluses (when we are able to grow them). From the outset we wanted to include a "CSA element" in the business but, at the same time, needed it to be genuinely sustainable and provide a reasonable living as it was (is) our main (only) source of income. Our only funding came from a Powys Council business start up grant…other capital came from us and interest free loans. We now have over 20 "members" who give an extra level of support by paying upfront for a book of "veg vouchers", which are then redeemed at the stall or bag collection points. Other community support comes in the form of "weed swoops" or work days; help with marketing and events; help on open days; even help making paper bags.

S4b Pasture-fed for life

The Pasture Fed Livestock Association (PFLA) was formed to champion the virtues of pasture and to provide a distinct identity for livestock systems that are based purely and simply on pasture. This session will provide a detailed insight into what they do and why they do it. (Organised by PFLA)

Phil Stocker (National Sheep Association): Chair

John Turner (PFLA): Background to PFLA and Pasture Fed certification

The Pasture Fed Livestock Association (PFLA) was formed in order to champion the virtues of pasture and to provide a distinct identity for livestock systems that are based purely and simply upon pasture. From our beginnings as a farmer's discussion group, we have built on the success of similar initiatives in the US, New Zealand and elsewhere in the world to help shape Pasture Fed systems here in the UK.

PFLA developed standards which cover beef and sheep production. Dairy remains an area of significant interest for future development. PFLA registered the PASTORAL trademark, which offers a guarantee that any produce sold under the label comes from animals reared to our clearly defined standards, so customers can have full confidence in Pasture-Fed produce and its provenance. The distinct characteristics of Pasture-Fed include:

- Pasture and forage as the primary nutrition sources
- Permitted forage includes grasses, herbs, clovers and other legumes
- Grain, concentrate feed and by-products are not permitted.
- High standards of animal welfare audited within our inspection system

Pasture Tracks is a unique system of labelling and Identity Preservation that provides the ability to trace produce back to the producer and even the individual animal from which it was derived. The "QR" 2-dimensional barcode printed on the PASTORAL labels can easily be scanned by a smart phone or other mobile device to link directly to our website and database. Further options developed for Pasture Tracks ensure there is also provision to represent food that comes from a specific group of producers or a particular part of the country.

Anna Bassett (PFLA): The benefits of Pasture Fed production

Pasture-Fed produce brings a wealth of benefits that give it a distinctive presence in the market. Other workshops at the conference will examine greenhouse gas emissions from grassland systems so this presentation will only briefly discuss environmental benefits of pasture based production. However there are other positive outcomes for those adopting Pasture-Fed systems. There is a solid body of evidence to suggest that Pasture-Fed produce provides some important health benefits for humans when compared to products from grain-fed animals. These include

- lower in total fat,
- healthier ratio of omega-6 to omega-3 fatty acids,
- higher in CLA -a potential cancer fighter
- higher in beta-carotene, vitamin E, B-vitamins thiamine and riboflavin, minerals calcium, magnesium, and potassium, total omega-3,
- lower in the saturated fats linked with heart disease
- longer shelf life than beef from grain fed animals.

Pasture-Fed systems can also deliver animal welfare benefits. The difference between Pasture-Fed and other meat may be less extreme in the UK than in other countries with more intensive production systems such as the US. Nonetheless, research shows benefits for ruminants raised in pastoral systems such as reduced lameness. Preference tests also show that cows will chose pasture over barns in many circumstances – giving weight to the perception that ruminants allowed access to pasture have higher welfare because the animals have freedom to express natural behaviours, such as grazing and exploration. Other studies show that ruminants fed on pasture and whose metabolism and production is matched to their natural capacity, are associated with lower stress increased longevity and increased fertility.

Dan Bull (Sheepdrove Organic Farm): Why should farmers just feed grass to their cattle and sheep!

The pros and cons of Pasture fed animals. Pros:

- Meat quality
- Animal welfare
- Soil preservation
- Farming sustainability
- Consumer confidence

Cons - So few not worth mentioning

How we here at Sheepdrove manage the whole package from breeding to grass selection through finishing to butcher retail outlets.

S5c EU Organic Regulation changes: implications for poultry producers

The development of EU organic poultry regulations has required much time and discussion, but they are still not finalized. What are the latest signals from Brussels and how will they affec producers?

Becky Nelder (ORC): Chair

Chris Atkinson (Soil Association): EU Regulation changes – the process and IFOAM position

The EU Regulations sets out a number of objectives for organic production including meeting consumer expectations, excellent environmental performance and high animal welfare. The detailed production rules are regularly reviewed to ensure that on farm practice comes as close as possible to fulfilling these goals. For organic pig and poultry production this means that the emphasis remains on the move to 100% organic feed and working towards the use of organic pullets. Previous attempts at making progress in these areas have not succeeded. In this presentation I will give an update on these issues first from the perspective of the European organic movement as represented by the IFOAM EU Group, and second from the point of view of the organic certification bodies who are responsible for implementing the transitional rules.

Nic Lampkin (ORC): The EU expert group's report and recommendations on poultry standards

In 2010, the EU Commission set up an expert group to advise it on technical issues relating to organic production. This group has been reviewing a range of issues making recommendations which in some cases have resulted in changes to the EU organic regulations. In 2012, the group examined a range of issues relating to organic poultry production, in particular with respect to housing, range management and stocking densities. The report was published at the end of 2012 and highlights the need for improvements in range management to ensure both a proportion of the diet coming from the range and appropriate safeguards, as well as rationalisation of stocking density rules across the different poultry types. It was expected that the report would be considered for changes to the poultry regulations in 2013, but the latest indications are that any changes will now be delayed until there is a full-scale revision of the regulations following reviews and consultations in progress.

Richard Kempsey (Stonegate): A producer perspective on the effects of possible changes

Richard will discuss possible changes based on his experience at Stonegate. Stonegate pack and distribute eggs from some 120 farmers into Waitrose. The farmers are all members of the Guild of Columbian Blacktail producers with free range and organic flocks stocked with the robust Columbian Blacktail bird. Currently some 26 farms from this group farm to Soil Association standards.
The Waitrose Duchy organic flocks are housed in small mobile sheds and have wind/solar power generation. All the pullet flocks for these houses are reared to Soil Association standards and have first access to the range from between 8 and 10 weeks dependent on the seasonal conditions on the range. Waitrose are the only high street retailer to stock a Soil association egg brand and they have always overtraded in organic egg against their competitors in the high street.

S5de Making farming more sustainable: tools for the job

This session seeks to improve the understanding of what sustainable farming and growing is really about, to explain the use of the tools available, and to motivate farmers and advisers to use them. (Organised by IOTA)

Mark Measures (IOTA): Chair

William Waterfield (Consultant): Farm assessments to develop organic farming sustainability

Developing sustainability in organic systems involves a range of issues from soil management and animal health to engagement with the public, but without financial stability a farming business cannot have a long term future. The paper will look at results from the survey carried out as part of the SOLID project which involved an assessment of the sustainability of 102 dairy cow and goat farms in 9 EU countries. Sustainability was assessed on each individual farm across the 12 "spurs" of : Soil Management, Biodiversity, Landscape and Heritage, Water Management, Nutrient Management, Energy and Carbon, Food Security, Agricultural Systems Diversity, Social Capital, Farm Business Resilience and Animal Health and Welfare. The paper will examine the lessons that farmers can learn from this survey and how it might be used to bench mark their business and help them to develop a more truly sustainable business.

Laurence Smith (ORC): Carbon benchmarking tools and how they help reduce energy and emissions

A number of tools have been developed in recent years which allow farmers and landowners to assess the 'carbon-footprint' of their holding and identify areas for improvement. The array of tools available can be confusing however as a result of differences in scope, the data sources used and the time investment required. For example, some tools provide a quick overview of an entire farm and consider only emissions within the farm gate, whereas others provide a product focussed assessment that accounts for emissions throughout an entire production life-cycle. The issue of carbon sequestration is also left out in some cases, whereas other tools provide a detailed breakdown of this area. This presentation will provide an overview of the tools that are available, the different approaches and how each of the tools can help to improve your farming businesses.

Christine Watson (SRUC): Nutrient budgeting for rotations, manures and mineral fertilisers

On organic farms, where external inputs are restricted, soil fertility needs to be maintained by balancing nutrient removal in produce with inputs from acceptable sources. Nutrient budgets at farm/field level are a useful tool for evaluating sustainable nutrient management and the environmental risks of different farming systems. Nutrient budgets can be applied to both major and micronutrients. The calculation can reveal unexpected sources, losses and imbalances of nutrients. Understanding how efficiently nutrients are used can help decision making in relation to rotation design, manure management and choice of inputs.

12:30–14:00 Lunch/networking (Suite 2/3, Ground Floor)

14:00–15:00 CLOSING PLENARY (Suite 5/6, Ground Floor)

S5/6 The role of sustainable intensification and agroecology in achieving food security sustainably

As food prices rise around the world, food security is high on the political agenda. Sustainable intensification is advocated as a solution, but its meaning is much debated, with some advocating increased production ahead of curbing demand, reducing waste and environmental sustainability.

What contribution can organic/agro-ecological approaches make in this context and how do we ensure an alternative voice is heard in the policy debate?

Lawrence Woodward (ORC): Chair

Nadia Scialabba (FAO): Food security, sustainable intensification and the role of organic agriculture, agroecology and low external-input systems

Within the international community, there is a general agreement on the need to transform the food and agriculture sector, but views are very divergent on the direction to be followed to achieve this target. The concept of sustainable intensification seeks productive cropping systems while respecting the natural recovery capacity of the ecosystem through the maintenance of undisturbed soil structure. The single most significant change in land management practices of sustainable intensification is the abandoning of mechanical soil tillage as a standard practice in crop production. Organic agriculture covers the whole food system, from production to labeling and commercialization according to precise standards, while agro-ecology and other low-input systems refer to production practices very similar to organic but without strict restrictions on input use. The opportunities and constraints of both systems are reviewed according to food supply, employment/ livelihoods and ecosystem services globally provided.

Through "sustainable intensification of crop production", crop yields increase in the long-term. However, significant yield increases can also be achieved in the short term in low production systems on degraded soils. Sustainable intensification is an effective example of how increased productivity can be combined with decreased environmental impact, especially in areas endowed with large availability of natural (land and water) and economic (financial capital) resources, such as many areas in Latin America. However, much of the potential decrease of environmental impact is related to actual application of genetically-modified crops and weed control management. In addition, permanent no-tillage may result in soil compaction, particularly with large-scale mechanized systems that will most likely have to revert to controlled traffic concepts, for instance by confining all agricultural machinery to the least possible area of permanent traffic lanes.

Organic agriculture seeks to produce food while maintaining ecosystem integrity. While in developing countries, organic management is an option for ecological intensification, in industrial contexts, it becomes an extensification strategy. The issue is whether enough surpluses could be produced on a global basis to meet population demands and at which price, given the fact that currently organic product prices are higher on average. The issue of land availability for extensification might be of concern in some areas, while in others, organic agriculture might relocalize food systems where food is most needed, such as market-marginalized areas where hunger prevails (e.g. areas of sub-Saharan Africa). Despite increasing trends of adoption, concerns are raised on the actual capacity of organic farming to meet food needs on global scale. Models demonstrate that the potential of organic agriculture and agroecology is considerable, especially under scenarios of ecological intensification in developing countries and in those areas faced with degraded soils or lack of capital and low product prices.

David Gould (IFOAM): Sustainability begins at home – moving into best practice

Personal and societal values are an important factor in understanding and moving toward sustainability. The organic movement often expresses its values in terms of the IFOAM Principles of Organic Agriculture, which address not only ecological and health concerns, but also the social interactions and organizing activities that bind people and communities together. The Principles, when grounded in action, can be expressed as a set of best practices, which span a full spectrum of complementary Sustainability Dimensions, which comprise societal, ecological, economic, cultural, and communication aspects. Best Practice overall means holistically addressing all of these Dimensions in the most relevant way for each context and actor.

Best Practice is what leads to sustainability – or so that is the presumption. In order for one to embody best practice, one must combine vision and practicality, and honestly evaluate one's own performance in the context of the system in which one lives and acts. Defining the boundaries of the system are thus a key factor to consider. Real and increasing limitations on the availability and quality of common goods – energy, water, soil, and biodiversity – are forcing systems to rethink the boundaries of the systems in which we operate and live. Local sustainability versus global sustainability – what are our priorities and possibilities? Organic agriculture holds many answers to conserving and building our natural resources. It is the core around which sustainable agriculture can be built, but it needs continued innovation and increased productivity. This discussion offers a lens through which to view our actions, both for the short- and long-term.

15.00 – 15.30 Refreshments and Close Of Main Conference

15.30 – 17.00 Special open session: Developing a UK Innovation Platform for Agroecology (Suite 5/6)

The proposed European Innovation Partnership element of the CAP reform Rural Development proposals could provide a unique opportunity for producers, researchers, advisers and others to come together to form 'operational groups' to drive forward a participatory research agenda with a focus on agroecological approaches to innovation. Building on the achievements of the IFOAM-led Organic Technology Platform (www.tporganics.eu) at EU level, the opportunity exists for a wide range of UK farming, environmental and other organisations to come together and create something similar that will help ensure that the most is made of the new opportunities. This special session is an open invitation to all interested to explore the idea and map a way forward.