

# Annual Report

November 2010 - October 2011





The object of the Progressive Farming Trust is the advancement of public education by the promotion, encouragement and advancement of knowledge of and research and experiments into agriculture, biological (organic) husbandry and technical, economic and social sciences or intermediate technology within the UK and internationally.

To this end, the Organic Research Centre is committed to developing sustainable land management and food production systems based on organic and agro-ecological principles, to ensure the health and wellbeing of soil, plants, animals, people and the environment.

The Organic Research Centre has played a central role, in the UK and abroad, in the development of organic food and farming research, policy and standards since 1980. Our aim is to strengthen our position and effectiveness as the leading independent UK research and development institution for organic food and farming, by:

1. Developing ORC's research programme and conducting research on organic/agro-ecological approaches to food and farming in order to:
  - a. Improve the productivity and sustainability of such approaches and address key technical problems where current practice falls short of organic/agro-ecological principles, recognising the importance of working within the participatory/farming systems research tradition.
  - b. Evaluate, with a view to improvement, the economic, social, environmental, quality and other impacts of such systems, including:
    - delivery of ecosystem services;
    - pollution, resource use and biodiversity impacts;
    - greenhouse gas emissions and climate change mitigation;
    - food security, sovereignty and sustainability of food systems;
    - food quality and safety; and
    - human/animal health and well-being.
2. Developing ORC's information services in order to:
  - a. Communicate organic principles/ best practice and disseminate technical and market information to producers, consultants, food businesses and others, so as to improve both business performance and delivery of public goods (climate change, animal welfare, biodiversity etc.), and
  - b. Facilitate the sound development of the organic sector primarily in the UK, but also internationally.
3. Developing ORC's education and public relations programme in order to:
  - a. Educate and inform students, school children, consumers and civil society more generally about the issues affecting the sustainability of primary food/energy/fibre production, and
  - b. Engage with the media on relevant food, farming and sustainability issues.
4. Engaging with and influencing policy-makers at local, national and international level in order to ensure that the potential of organic/agro-ecological approaches is recognised in climate change, food security, biodiversity, animal health/welfare, food quality/health and agri-environmental/rural development policy debates and that appropriate policies are developed.
5. Developing the farm and estate of ORC as a resource, and its administration and governance systems, to support the above activities.

**Public benefit**

From April 2008, section 4 of the Charities Act 2006 requires explicit reporting of the public benefit derived from the Charity's activities, consistent with guidance published by the Charity Commission.

The Progressive Farming Trust was established for the advancement of education through research. In the context of the current Charity Commission's 13 areas of potentially relevant public benefit purposes, the relevant ones are:

- advancement of education, i.e. activities to promote, sustain and increase individual and collective knowledge and understanding of specific areas of study, skills and expertise;
- the advancement of health;
- the advancement of environmental protection and improvement (in particular the promotion of sustainable development and biodiversity; the promotion of recycling and sustainable waste management; and research projects into the use of renewable energy sources); and
- the advancement of animal welfare through research into improved livestock production systems.

Specific examples of how these public benefit issues are addressed are provided in this report.



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## Chair's report

2011 has been a year of consolidation for the Trust. Following the completion of major building work and significant staff changes in 2009 and 2010, the focus in 2011 has been on developing our research and other work, a process that is bearing fruit.

Our research activity has continued to grow, particularly as a result of securing EU-funded contracts, which has helped diversify our income streams. Bidding during the year has also resulted in several new projects that will start in 2012. These successes have enabled us to undertake new research on livestock, as well as to continue our agroforestry work, both areas we are keen to develop further.

The increased research activity has resulted in a large number of publications, including several in peer-reviewed journals, demonstrating the scientific credibility of our work.

On the advisory side, the withdrawal of government financial support for advice on conversion to organic farming in both England and Wales has left the agricultural industry with a serious information gap. The loss of these contracts has meant we cannot maintain the 20-year-old Organic Advisory Service at ORC. Instead, we are refocusing our advisory efforts on supporting all UK and Irish organic consultants with accreditation, professional development and other information support services through the integration of the Institute of Organic Training and Advice during 2012.

While one-to-one advice has suffered, we have been actively developing other means of exchanging organic knowledge, through our annual conference, which goes from strength to strength, through a revitalised ORC Bulletin and website, as well as through new social media initiatives. We are very encouraged by the response to these developments.

During 2011, we launched the Participatory Research and Demonstration Network, designed to build on our experience of working closely with producers on key research questions by providing a forum for research needs and innovations to be identified, and to encourage a low-cost, self-help approach to research.

The public debate about organic farming has been more challenging. We remain committed to assembling and reporting the evidence on the environmental, animal welfare, food quality and other impacts of organic farming. In 2011 we completed two reviews on the biodiversity and soil carbon sequestration impacts of organic farming. The evidence still remains very much in favour of the beneficial impacts of organic production, although we recognise that organic can't always guarantee to be better, and that there is plenty of scope for further improvement. Much of our research and knowledge transfer work is focused on addressing this.

Despite these efforts, the big issues – climate change, biodiversity loss, genetic modification, food security, economic crises and CAP reform – do not go away. We are increasingly engaging with these debates. In particular our involvement with research on greenhouse gases, on biodiversity and ecosystem services and on organic farming policies has left us well placed to engage with policy makers to present coherent arguments and evidence about the contribution that organic/agro-ecological approaches to food production can make.

Our policy advocacy work also encompasses input into organic regulatory issues and to agricultural research agenda-setting at the European level, where the contrasting approaches of 'sustainable intensification' and agro-ecology are now intensely debated. We intend to develop this work vigorously in the coming year, supported by improved communication with the media and the public.

Financially, the year was less difficult than the previous year, with expenditure reduced significantly, particularly on central administration. However, income was also slightly lower due to the ending of key government advisory contracts, the reduction in voluntary donations and reduced income from estates and investments. Overall we again made a loss, though smaller than in 2010. Despite the success with research grants, 2012 will remain challenging, with high priority being given to rebuilding our donation income as well as continuing to bid for new project contracts.

*Christopher Bielenberg*



## Research for sustainable food and farming systems

ORC's research to support the development of sustainable food and farming systems aims to improve the productivity and sustainability of organic/agro-ecological approaches and to evaluate, with a view to improvement, their wider impacts. This includes the delivery of ecosystem services; pollution, resource use and biodiversity impacts; greenhouse gas emissions and climate change mitigation; food security, food sovereignty and food system sustainability; food quality/safety and health and wellbeing.

Our research programmes deliver public benefits through the advancement of health; the advancement of environmental protection and improvement (in particular the promotion of sustainable development and biodiversity, the promotion of recycling and sustainable waste management and research projects into the use of renewable energy sources); and the advancement of animal welfare through research into improved livestock production systems. The results of our research are available in the public domain.

### Crops research

(Team Leader Dr Thomas Döring)

A major focus of our crops research is the use and maintenance of plant diversity to increase crop performance and stability and to enhance the provision of ecosystem services. Using a whole-system approach in highly participatory research projects, we are developing innovative solutions for farming systems in a range of arable and horticultural crops, including wheat, oats, barley, spelt, oilseed rape, broccoli, beans, and forage legumes.

The public benefits from this programme include the advancement of agricultural, ecological and plant breeding knowledge through research as well as contributing to food security (through more stable yielding and locally adapted populations), sustainable development, biodiversity conservation and the reduction of greenhouse gas emissions through better design of the fertility building (nitrogen and carbon capture) phase of rotations, reducing the need for industrially fixed nitrogen fertiliser inputs and fossil energy use and their associated emissions.

#### Genetically diverse wheat for stable yields and quality: *Wheat Breeding LINK*

Wheat Breeding LINK is one of our major research projects. It is led by ORC and follows on from a previous project focusing on the use of high genetic diversity in wheat. The current project, running from 2008 to 2012, is funded by Defra and industry partners, including plant breeders, organic certification bodies, millers and bakers.

A key aim is to assess whether the performance and stability of winter wheat yields and wheat quality can be

increased over a wide range of (changing) environmental conditions by introducing a high degree of genetic diversity in the field.

For this purpose Composite Cross Populations (CCPs) are being trialled both in replicated field experiments and in a large number of on-farm trials throughout England. Assessments include the growing characteristics and agronomic properties, as well as the processing qualities and marketing capabilities of the CCPs for end users, e.g. through baking and malting tests.

CCPs also offer the potential for selective adaptation to the local farm site on which they are grown. This is being investigated using molecular tools in collaboration with the John Innes Centre, Norwich. Through this work we hope to advance ecological and plant breeding knowledge and contribute to food security in increasingly unstable environments, by developing more stable yielding and locally adapted crops.

#### Species diversity in leys for improved functionality of rotations: *Legume LINK*

A similar approach is being pursued in the Legume LINK project. Many successful low-input systems rely on a legume-based fertility-building ley as an alternative to mineral nitrogen applications. Thus, there is increasing interest in applying these systems more widely. Legume LINK aims to create a legume-based species mixture that can have significantly improved resilience in fertility building and nitrogen release dynamics compared to traditional grass/clover mixtures.

In the project, we investigate how increased species diversity in the ley phase of the rotation can help to

improve the nitrogen use efficiency of cropping systems. In addition, we are collecting data on the growth characteristics and agronomic properties of several legume species across a wide geographical range in order to make targeted recommendations on which legume species to include in the rotation, depending on location.



*Medicago sativa (lucerne) flower*

The Legume LINK project, which runs from 2008 to 2012, is funded by Defra and industry partners and led by ORC. Research partners include the Institute of Grassland and Environmental Research (IBERS), Rothamsted Research, the Scottish Agricultural College (SAC), NIAB/TAG, and Duchy College.

#### Agricultural plant diversity on an even larger scale: *SOLIBAM*

The EU FP7-funded project *Strategies for Organic and Low-input Integrated Breeding and Management (SOLIBAM)* runs from 2010 to 2014.

It aims to improve quality and stabilise yields in organic and low-input agriculture through increased diversity in cropping systems. This requires an integrated approach combining



innovative breeding and crop management techniques. Comparative trials are coordinated across a wide range of geographical locations, covering the main agro-ecosystems of Europe as well as sub-Saharan Africa and the Middle East. Dissemination of the results is of high importance and there will be a number of knowledge transfer events in different countries.

The project is led by the French National Institute for Agricultural Research (INRA) and brings together 22 partners from the private and public sectors, representing ten European and two African countries (Ethiopia, Mali), and one international research organisation (ICARDA).

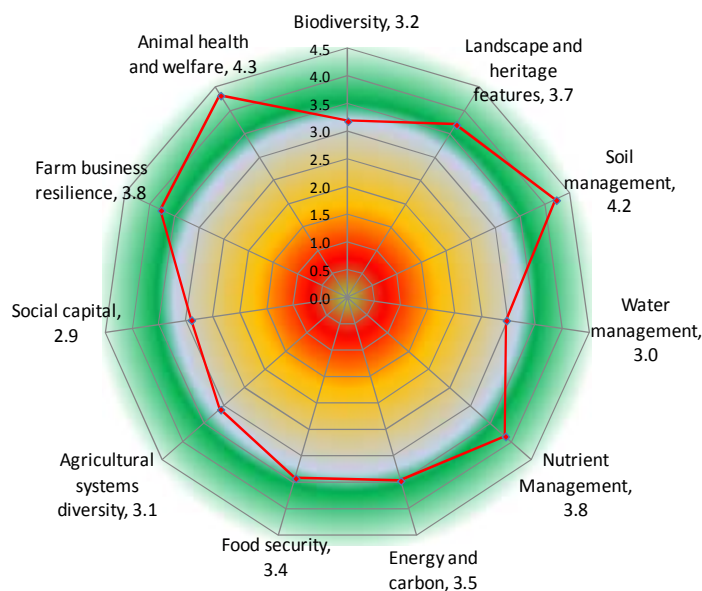
### More diversity: QUOATS, Oilseed rape, Ecodyn and other projects

ORC is also participating in a number of smaller projects. The QUOATS project (*Harnessing new technologies for sustainable oat production and utilisation*) is a Defra and industry-funded LINK project on oat breeding. It runs from 2009 to 2014 and is led by Aberystwyth University. ORC is trialling several oat varieties and newly bred lines under organic crop management in order to contribute to the development of oats that are best suited to organic conditions.

In an HGCA-funded project on new approaches to weed control in *oilseed rape*, ORC is assessing the use of vision-guided hoes to control weeds without the use of herbicides in oilseed rape; this project runs from 2009 to 2012 and is led by NIAB/TAG.

A pilot trial on reduced tillage in organic farming that started in 2010 continued in 2011 in collaboration with Duchy Home Farm, the Institute of Organic Training and Advice and the Royal Agricultural College. On-farm field experiments are being used to assess the potential of reduced tillage to develop cropping systems with higher energy efficiency, improved soil conservation and better resilience against water stress. A new Defra/EU-funded project building on this initial work will start in 2012.

ORC continues to collaborate with several UK and overseas universities in joint supervision of crop-related PhD and MSc projects alongside our existing research programmes.



Example of public goods tool output

### Ecosystem services and sustainability assessment

(Team Leader: Dr Bruce Pearce)

This expanding programme focuses on the wider impacts of organic and other farming systems, including the assessment of their sustainability and contribution to delivery of ecosystem services. The public benefit from this work includes the advancement of agricultural and ecological knowledge through research as well as contributing to food security, climate change mitigation, sustainable development and biodiversity conservation.

### Greenhouse Gas Platform

The Agricultural Greenhouse Gas Research Platform is a research programme funded by Defra and the devolved UK governments. The Platform seeks to improve the accuracy and resolution of our reporting system by providing new experimental evidence on the factors affecting emissions and statistics relevant to changing farming practices in the UK. It aims to deliver an improved greenhouse gas (GHG) reporting system through three closely linked projects.

ORC is working on one of these: *Data Synthesis, Modelling and Management* (AC0114). This will provide a synthesis of existing and new evidence on GHG emission factors and the effectiveness of mitigating measures, derived from literature reviews and the other partner projects. This will be integrated with UK agricultural statistics and data on farm practices to define an improved

Emissions Inventory structure for reporting and tracking change. This will be supported by the development of a robust methodology to quantify the uncertainty in emission estimates.

ORC's role is to assess the suitability of industry and government level farm-practice data for inclusion within the working inventory. We are also contributing to the development of a revised inventory structure, through helping to define the (organic and non-organic) farm systems that will be included within the annual reporting. We are responsible for knowledge exchange with industry across the Greenhouse Gas Platform projects and for organising workshops to facilitate the transfer of expertise and data from industry sources.

### Sustainability assessment

The Public Goods tool, developed by ORC with funding from Natural England and Defra, was improved and integrated into other projects undertaken by ORC and our collaborators. This included modifications for different systems and countries (e.g. for dairy systems as part of the SOLID project – see below).

In a separate Defra-funded project (OF0386) led by the Warwick Crop Centre (formerly HRI) at Wellesbourne, ORC is contributing to the development of methods for assessing the sustainability of farming systems: This project aims to describe the range of current UK farming systems, for example organic, low input, extensive,



integrated, intensive etc., and to develop methods to describe their environmental, economic and social characteristics. Previous studies were reviewed to inform the description of farming systems, and work on selection of appropriate indicators has been initiated. Once completed, the methods will be validated with case studies.

Laurence Smith is undertaking a PhD that is aiming to assess the climate change and other environmental implications of a large scale conversion to organic farming within England and Wales. This work will help to highlight benefits and/or dis-benefits provided by the organic approach with a focus on assessments at a farm system rather than individual product level, investigating the potential for interactions and trade-offs between the farming systems identified. This work will build on and contribute to, the Defra-funded sustainability assessment and greenhouse gas data projects.

**Eco-agroforestry: integrating agriculture, forestry and biodiversity**

This project, part-funded by the Ashden Trust from 2009 to 2011, focuses on promoting the integration of agroforestry with organic/agro-ecological principles. The project aims to improve the output of food and fuel from these systems whilst also enhancing biodiversity.

In the second year of the project, we completed a review of how agroforestry sits within current UK agricultural policies and we have made recommendations for policy changes needed to support the wider adoption of agroforestry. We held a successful meeting to discuss with stakeholders the establishment of an eco-agroforestry network and we are now developing the network and its activities. The website [www.sustainable-agroforestry.org](http://www.sustainable-agroforestry.org) has been established and is being utilised, along with the ORC website, to publicise the work and outputs from the programme.

We also worked with the University of Reading on an MSc project to investigate the influence of tree rows on an ecosystem service (pest and disease control) and a joint PhD student started in October 2010 who will investigate the goods and services that agroforestry can provide.

**Livestock research**  
(Team Leader: Dr Bruce Pearce)

The development of this new programme continues with the start of two new projects on dairy production and on feeding pigs and poultry.

The public benefit from this work includes the advancement of agricultural and ecological knowledge through research and the advancement of animal welfare, as well as contributing to food security, sustainable development and climate change mitigation through improved utilisation of on-farm resources.

**Sustainable organic and low-input dairying: SOLID**

The aim of this EU FP7-funded project is to make organic and low-input dairy systems more competitive and support the multifunctional benefits they provide to society. The project runs from 2011 to 2015 and is led by Aberystwyth University, with partners from nine European countries. Within the UK, the project involves collaboration with two milk producer groups, OMSCo and Calon Wen.

ORC is responsible for developing participatory research projects with dairy producers. This has included adaptation of the ORC Public Good tool (see above) for the rapid assessment of the sustainability of cattle and goat dairy farms across ten partner countries, ranging from the Mediterranean to Finland and from Wales to Romania. It also involves co-ordination between the partner countries preparing for future participatory research projects.

Work on novel forages for dairy animals has involved the establishment of an agroforestry system at Elm Farm. Also, at Wakelyns, agroforestry biomass produced has been monitored and sampled for chemical analysis as a potential feed.

**Improved contribution of local feed to support 100% organic feed supply to pigs and poultry: ICOPP**

This EU CORE Organic 2 ERANET project, led by Aarhus University, Denmark, runs from 2011 to 2014. 10 partner countries are involved, with the UK work funded by Defra and delivered by ORC and FAI.

The project aims, through an innovative approach of increased knowledge of the characteristics of different local feeds and their wider impact on growth, health/welfare and environment, to produce new feeding strategies which comply with the aims for high animal welfare, production economics and environmental concerns. The main objectives are:

- improved knowledge of availability and nutritional value of under-utilised or new organic feed ingredients by animal category with a focus on local feed resources;
- improved understanding of the possible benefits of roughage inclusion in relation to nutritional and behavioural needs as well as its impact on health and welfare;
- understanding how direct foraging in the outdoor area can contribute to meeting the animals' nutritional needs; and
- assessing the economic and environmental consequences of increased reliance on local organically-produced feed.

The project will include a range of feeding experiments to be carried out with pigs (sows, piglets and finishers) and poultry (layers and broilers). These trials will include different feedstuffs, roughage, and foraging. The insight gained from these activities will be used to produce feeding strategies adapted to the differences in local feed supply, the economics of different feed procurement scenarios, and variations in production structure in different parts of Europe.





### Socio-economic research

(Team Leader Dr Susanne Padel)

The focus of the socio-economic programme includes markets and consumers, certification, organic farm incomes and policy evaluation.

Public benefit is generated by enabling a range of users, including producers, supply chain businesses, and consumers, to improve their financial and environmental sustainability, and by improving the effectiveness of regulation and policy-making by governments at national and European level.

#### Economic analysis of organic certification systems: *Certcost*

This EU FP7-funded project, led by the University of Hohenheim, Germany, ended in 2011. The main project objective is to generate research-based knowledge on how to improve the organic food certification system in terms of efficiency, transparency and cost effectiveness. In the final project year, two additional case studies of alternative approaches to certification in the UK (output based monitoring of animal welfare and alternative systems for growers) were agreed and carried out in support of the overall objectives of the project. A meeting with UK industry stakeholders was held at ORC to discuss the final recommendations of the project. A synthesis report and recommendations from the project have been published.

#### Evaluation of the German organic research programme: *BOEL*

This German government-funded project led by Interval, Berlin, runs from 2011 to 2012. It aims to evaluate the relevance, effectiveness and efficiency of the research support provided under the programme.

Specific challenges arise from the programme aim of supporting the development of organic farming through applied research with a strong emphasis on knowledge communication. This implies not only counting, e.g. publications and dissemination events, but consulting with a range of experts from the sector to assess the wider impact on the German organic sector.

An effects model setting out the activities, sector and societal goals of

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the programme was developed, relevant success indicators were identified and interviews with German stakeholders were held. Project data relating to 659 German organic research projects were analysed, supported by an on-line survey of project leaders. A random set of 54 projects were selected for further detailed analysis in later stages of the project. ORC will gain a better understanding of the topics covered and will write and translate into English eight thematic summaries of specific areas.

#### Organic farming policy evaluation for the European Commission

This DG-Agri-funded project, led by the von Thünen Institut in Braunschweig, Germany, was started and completed in 2011. The aim of the project was to identify and analyse key issues in the implementation of policy instruments supporting the organic sector in Europe and to present recommendations for future development of EU policies.

The work included a review and categorisation of public support measures offered under Pillar I and II of the CAP and the level of uptake and public spending across the whole EU 27. In-depth case studies of regional or national policies in six Member States (including England and Wales in the UK) were carried out. The analysis focused on the interaction between the various policy instruments and the development of the sector in terms of production and demand, linkages with the EU Action Plan for organic farming of 2004 and the coherence of the support strategies. The work will be published by the European Commission in 2012 and is expected to feature in the ongoing CAP reform discussions.

#### Financial performance of organic farming in England, Wales and EU

The ongoing Defra-funded monitoring of the economics of organic farming in England and Wales led by Aberystwyth University resulted in a report on the financial performance of organic farms in 2009/10, providing evidence that organic farms have in general maintained income levels and continue to perform as well as similar non-organic farms.

In a related study as part of the EU FP7-funded *FACEPA* project, a re-

view of the implications of organic farming methods for costs of production and the provisioning of environmental services was carried out.

In a further related desk study coordinated by ORC, the *Potential for extending economic farm-level benchmarking to environmental and other aspects of farm performance* was explored. The review examined how various benchmarking tools, including the Farm Business Survey (FBS)'s own service, covered the areas of energy use and greenhouse gas emissions, animal health and welfare, and agri-environment and management practices. A template for greenhouse gas emissions was developed to illustrate how the FBS service might be developed to include environmental issues.

#### 2011/12 Organic Farm Management Handbook

The 9th edition of the biennial Organic Farm Management Handbook was published in 2011 by ORC with the support of Triodos Bank and Farming Connect in Wales. The handbook remains an important source of information for anyone interested in the business of organic farming – covering a broad range of market, certification, policy, financial and technical information about different organic systems and enterprises. The new edition reflects honestly the difficulties that the organic sector has faced in the marketplace as well as featuring results from the farm income study and from the changes to policy support in England and Wales.

#### Energy Efficiency, Tradable Energy Quotas and the Lean Economy

This three-year project, funded by the Polden-Puckham Charitable Foundation, was led by David Fleming until his untimely death in November 2010. Shaun Chamberlin worked to complete the project, which developed the concept of Tradable Energy Quotas (TEQs) as a more equitable and effective alternative to carbon taxation, and which aimed to raise the quality of the discussion on personal carbon allowances as a realistic policy. TEQs are argued to be the fairest way of involving individuals in the critical task of reducing dependence on fossil fuels. The final year of the project saw the key conclusions republished, with a significant increase in media interest in the concept.



## Information Services: supporting knowledge exchange through advice and education

The main objectives of our work in this area are to:

- communicate organic principles/best practice and disseminate technical and market information to producers, consultants, food businesses and others, so as to improve both business performance and delivery of public goods (climate change, animal welfare, biodiversity etc.);
- facilitate the sound development of the organic sector in the UK and internationally;
- educate and inform students, school children, consumers and civil society more generally about the issues affecting the sustainability of primary food/energy/fibre production; and
- engage with the media on relevant food, farming and sustainability issues.

The Information Services team continues to pursue these objectives in challenging times by means of range of activities including advice, education, events, website, bulletin and other publications. The main focus in 2010/11 was on the delivery of the Organic Conversion Information Service (OCIS) in England until its closure in March 2011, the continuing delivery of OCIS in Wales, the annual producer conference in January 2011 as well as work with Organic Centre Wales (OCW) and the Transatlantic Partnership (TAP).

### Advisory services: *OAS, OCIS and OSDG*

The *Organic Advisory Service* (OAS) continued to deliver advice and consultancy through this period, much of which was delivered to and via the *Organic Systems Development Group* (OSDG) under the guidance of Mark Measures. Work outside of this provision dropped to a very low level although it continued to include planning guidance and training.

OAS advisors continued to deliver the Defra-funded *Organic Conversion Information Service* (OCIS) in England (managed by Natural England) in its final year. The service included a helpline, information packs and advisory visits to producers considering converting to organic production. Numbers contacting the helpline and receiving visits fell again compared to previous years but there was a last minute flurry as the end of the scheme approached. The service closed on 31 March 2011, ending a 15-year period in which the OAS delivered between 8,000 and 9,000 on-farm visits that in many cases made a difference both to farmers' decisions to convert and to how they did it.

Before the scheme closed, resources from the OCIS budget were also used to support further work on the development of the Public Goods tool (see above) and a general review of OCIS provision, which included *inter alia* the idea of an organic information and knowledge hub.

### Producer conferences/events

The 5<sup>th</sup> ORC Organic Producers Conference *Facing Present and Future Challenges* was held in January 2011 at the 4 Pillars Hotel, Cotswold Water Park. The weather was wintry but did not disrupt attendance as in the previous year. A varied programme found favour with participants, with an unprecedented 50% of feedback forms returned. Attendance was slightly up, at 220 registered participants. As with previous conferences, the engagement of producer groups and sector bodies was an important factor in the success of the event, as was the regular sponsorship from Triodos Bank. The Institute of Organic Training and Advice (IOTA) held its annual conference at the same time, making a significant contribution to the main event.

### Looking forward in England

ORC engaged in discussions with a number of like-minded organisations to consider the establishment of an Organic Knowledge Partnership (OKP). This initiative was influenced by radical changes to rural development funding for vocational training as a result of the change of government and the abolition of the regional development agencies. The transfer of the remaining funding to Defra meant that there was no clear idea of how skills training would be delivered over the remaining years of the Rural Development Programme for England (RDPE). This potentially included

services for organic producers, so the OKP met on a number of occasions to develop a Memorandum of Understanding between the partners and to lay the foundations for an application to the RDPE for a national programme of skills training once the funding gates were re-opened.

The change in circumstances for government-funded advice has also meant a need to re-evaluate the role of the Organic Advisory Service within ORC. As a result of discussions with the Institute of Organic Training and Advice, agreement was reached in principle on a merger between the two organisations, which would in future see ORC withdrawing its commercial advisory service and focusing more on supporting all the organic advisors working in the UK and Ireland with information, accreditation and other professional support. The merger process is due to be completed in 2012.

### Working in Wales: *Organic Centre Wales, Welsh OCIS and Farming Connect*

Our work in Wales has been primarily focused on engagement with Organic Centre Wales ever since its establishment in 2000. The Welsh Government continued to fund OCW during 2011, but following a review of OCW in 2010 it was announced that the core funding grant would stop for good in September 2011. ORC has continued to support the activities of OCW, with involvement in the





provision of policy advice, responses to consultations with a particular emphasis on GM issues, engagement with Lantra on education and training matters, and direct involvement in the management of OCW, including participation in the steering group of the Better Organic Business Links supply chain efficiencies programme.

The OAS continued to contribute to the delivery of the Welsh OCIS, the contract for which is to end on 31 December 2011. Because of the under-spend in the OCIS budget it was agreed that some core functions of OCW could continue to be financed for that short period. As in England, demand for Welsh OCIS visits has been low, but this has also been partly because support funding is only available when the Organic Farming Conversion Scheme is open. It had not been clear whether there would be further windows of application but one did finally open on 3 October 2011 for four weeks.

The OAS has been engaged with Farming Connect in Wales on two levels. One is the Farming Connect Organic Development Programme operated by OCW, in which OAS and ORC staff have played significant roles over the years. In a new round of tendering OCW joined a consortium led by Aberystwyth University's Institute of Biological, Environmental and Rural Science (IBERS) to provide a service right across the enterprise spectrum. Unfortunately for OCW, and ORC as a partner, a rival bid was successful. The other area of Farming Connect engagement was as an independent provider of technical information and mentoring. A strategic decision was taken not to re-apply for approved status as the small amount of work gained did not justify the work required to submit a bid.

### **Educational activities with local schools and the community**

A funding application to the Local Food element of the Big Lottery Fund was submitted seeking funds for a part-time education officer, but this was not successful. As a result, we have been unable to maintain the programme following the retirement of our Education Officer. Activities in this area have therefore been wound down for 2012.



*College of Atlantic campus,  
Bar Harbor, Maine*

We continue to believe that, with the conference centre and garden facilities, there is real potential to develop an education programme focused on food systems and sustainability, and efforts to fund both an education officer and the continued development of the horticultural education site will be maintained.

Following the success of the 2010 Food Festival a more ambitious event was held in July 2011. This was organised in conjunction with the villagers of Hamstead Marshall and combined the Food Festival elements that were so successful in 2010 with the village fete, a craft fair and evening entertainment. Although it was judged a success by all who took part, funding constraints mean that the event will not be repeated in 2012.



*Food Festival at Elm Farm, 2011*

### **Educational activities with students and professionals**

In the third and final year of the Transatlantic Partnership (TAP), ORC joined with its partners, the College of the Atlantic (CoA; Bar Harbor, Maine, USA) and the University of Kassel (Witzenhausen, Germany) to continue

to deliver a range of activities and outcomes. We hosted one intern from CoA during the year and plans are in place to host more in 2012.

The hosting of interns from elsewhere has continued; they have made valuable contributions to ORC core and project activities, and several have proved to be keen gardeners. The main activity for ORC was the research, writing and delivery of a submodule *A Systems Approach to Organic Farming* of the electronic learning course that was developed jointly by all three partners. The 10-week course used the Moodle Learning Management System at the University of Kassel and was delivered in Autumn 2011.

Three members of ORC staff (Bruce Pearce, Roger Hitchings and Jo Smith) along with Professor Peter von Fragstein from the University of Kassel visited CoA in October on a faculty exchange visit to discuss in detail potential joint research ideas and to look at the resources available including the recently acquired Peggy Rockefeller Farm. The visit included an opportunity to visit Eliot Coleman.

ORC staff contributed to the MSc Course for Biological Agriculture at the University of Barcelona ([www.ub.edu/agroecologia/masterae](http://www.ub.edu/agroecologia/masterae)) with lectures on policy support for and the profitability of organic farming systems. They have also contributed to the Scottish Agricultural College's distance learning MSc and PG-Dip course on organic farming covering marketing and policy topics ([www.sac.ac.uk/learning/courses/post-graduate/taught/mscorgfarm](http://www.sac.ac.uk/learning/courses/post-graduate/taught/mscorgfarm)).



## Supporting the development of the organic sector through advocacy and communication

Our objective in this area is to engage with and influence policy-makers at local, national and international levels in order to ensure that the potential of organic/ agro-ecological approaches is recognised in climate change, food security, biodiversity, animal health/welfare, food quality/health and agri-environmental/ rural development policy debates and that appropriate policies are developed. Our policy engagement is primarily at three levels – within the organic community, with other NGOs and the agricultural industry, and with governmental agencies and committees, both in the UK and in Europe.

The public benefit from our policy and communication work therefore derives from the advancement of education, in particular relating to sustainable agricultural production methods, food security and environmental protection, including climate change mitigation.

### Supporting the development of the organic movement

Facilitating the development of organic producer groups continues to be an activity, though at a reduced level compared with previous years. Roger Hitchings continues to provide support to the Organic Growers Alliance, and Lawrence Woodward has maintained his role as a Director/Board member of Organic Arable and Organic Seed Producers. Nicolas Lampkin continued to serve as a Director/Board member of the Welsh meat levy company Hybu Cig Cymru/Meat Promotion Wales for part of the year, representing organic sector interests. As a Director of the Institute of Organic Training and Advice, Nicolas Lampkin has also taken forward negotiations on the proposed merger of IOTA with ORC. We have continued exploring the potential for better relationships between the major organic charities (Soil Association, Garden Organic and ORC), leading to new joint initiatives with the Soil Association.

At European level, we are involved with policy work through the International Federation of Organic Agriculture Movements (IFOAM) EU group, addressing research priorities (through TP Organics – see below), CAP Reform and organic regulation issues. We are represented both in the IFOAM EU group (with Lawrence Woodward as a deputy UK representative), and in the forum of UK IFOAM members (represented by Nicolas Lampkin) that started meeting regularly in 2009. We have maintained a low level engagement with the Food Quality and Health organisation (represented by Lawrence

Woodward), although opportunities for a more dynamic engagement have emerged as a result of new project funding and will be taken forward in 2012. Our involvement with the European Consortium for Organic Plant Breeding (ECOPB, represented by Thomas Döring) has developed significantly, with an international event at ORC in September 2011.

Engagement with the European technology platform for organic food and farming (TP Organics: [www.tporganics.org](http://www.tporganics.org)) has been of particular significance. Susanne Padel has continued to actively support the initiative, including making presentations at EU level events and engagement in the debate over future EU research funding for agriculture within the new Horizon 2020 framework currently under discussion.

### Working with other agricultural and environmental organisations

ORC continues to engage with a number of other organisations on relevant issues, with particular emphasis on GMOs and climate change continuing in 2011. On genetic modification, we have continued to support GM Freeze (represented by Bruce Pearce) as well as influencing the debate through the development of alternative breeding and agro-ecological approaches in our research (see above). On climate change, we continue to work with the IFOAM/FAO-sponsored Round Table on Organic Farming and Climate Change (represented by Laurence Smith) and to participate in the delivery of the English agricultural industry greenhouse gas action plan (represented by Nicolas Lampkin).



*ECOPB members discussing organic seed regulations at ORC's Elm Farm conference venue*



### Working with government in the UK and internationally

ORC continued to be actively engaged with a number of government advisory committees. The EU Commission's expert group to provide technical advice on organic production (EGTOP) includes four ORC staff: Nicolas Lampkin as a permanent member and Susanne Padel, Bruce Pearce and Roger Hitchings as 'pool' members to be invited to serve on sub-groups when required. The group has been working actively in 2011, with Nicolas Lampkin acting as rapporteur for a sub-group on feed additives, the conclusions of which feature in EU regulations in 2012.

Nicolas Lampkin continued as a member of the Welsh Government's Food and Drink Advisory Partnership and Chair of its Organic Strategy Group, although the Welsh Government decided to close these groups down in October 2011. He has also been an active member of the Natural England/Defra agri-environment stakeholders group, which has been reflecting on future directions for agri-environment policy (including organic farming support) in England.

### Communication with the wider public

As a research organisation primarily, we do not see our role as that of a campaigning or membership organisation engaging directly with the wider public. We rely primarily on the ORC Bulletin, our website and increasingly social network media to make information available on a regular basis.

The new format, quarterly, printed Bulletin has been well received, as has the monthly e-bulletin launched in September 2011. However, we remain concerned to make information more widely available, particularly where the media debate has become partial or poorly informed. Through the Bulletin, website, press releases and other means we have attempted to balance debates on key issues, though there is increasing evidence of a co-ordinated lobbying campaign to promote GM and undermine organic/agro-ecological alternatives.

We continue to support the EU-funded consumer information campaign, match-funded by industry partners and led by Sustain and the Organic Trade Board, which began to undertake significant activities in 2011. ORC is continuing to support the delivery of the programme through providing advice on research evidence for claims made in support of the 'Why I Love Organic' theme.



## Developing ORC's resources and facilities for the future

During 2011, some limited capital improvements and repairs to buildings were carried out, but significant developments were put on hold while we carried out a review of longer term aspirations for our land holdings and buildings. An action plan has been agreed with the farm tenant that should see increased ORC research activity on the Elm Farm site, and a site development plan will be initiated in 2012.



Further work is needed to improve our IT systems, in particular broadband access. During 2011, new opportunities emerged, and these will be progressed with the active participation of the local community in 2012.

### Developing towards 2016

The aims and objectives outlined in the report are drawn from the 2010-2012 Corporate Plan. A new Corporate Plan for 2012-2016 has been developed during 2011. Core to this plan is a revised mission statement, which states that:

*The Organic Research Centre is a research organisation committed to:*

- *developing sustainable land management and food production systems based on IFOAM organic and agro-ecological principles ;*
- *disseminating knowledge to current and future farmers/land managers (knowledge networks) and other related businesses;*

- *compiling evidence on systems performance; and*
- *informing public debate through dissemination of knowledge to policy makers and opinion leaders, and through them the wider public.*

*in order to ensure the health and wellbeing of soil, plants, animals, people and the environment.*

The Organic Research Centre continues to lead in the fields of research, development and advice for organic agriculture, with the public benefits that that entails. For more than 30 years, it has played a central role in the development of policy and standards for organic farming and food within the UK, EU and internationally. The Centre's alliance of practice and policy, on-farm and desk research, and consultancy and advice is unique. We will continue to develop this approach, with an increased emphasis on working in partnership with other organisations.



## Financial report

### Review of financial position for year ended 31st October 2011

At £1,119,197, income generated from donations, grants, investments and charitable activities was 6% lower than 2010 (£1,189,635). Both voluntary and investment income were reduced, in large part due to the recession, with total income from these sources down by 31% at £139,306 (following a 21% fall the previous year). In contrast, income from other sources was almost unchanged at £979,891 (2010: £986,573), representing 88% of total incoming resources (2010: 83%).

Expenditure, at £1,190,997, was down 13% compared with 2010 (£1,368,880). This reflected the reductions in administrative and support costs following a period of staff restructuring. Overall expenditure on charitable activities fell by 9% to £1,172,995 (2010: £1,290,488). Of this, expenditure on research projects fell by 2% to £977,344 (2010: £995,124), with staff costs increasing by 10% to £623,227 (2010: £566,301). This increase in part reflected costs of additional staff required to meet new project commitments. However, fundraising and publicity costs fell to £6,412 (2010: £64,159), in part due to staff departures without replacement.

Despite the reduced expenditure, the further loss of voluntary income (supporting a range of core-funded projects) led to a loss for the year, albeit lower than the previous year. The trading deficit (net outgoing resources) fell to £71,800 (2010: £179,245). Investment assets fell in value by £6,746 (2010: £22,418 increase). The net overall loss for the year (net movement in funds) was £78,546 (2010: £156,827). This deficit was not consistent with the small trading surplus budgeted for the year, due to lower income from farm rental, voluntary donations and research income than expected.

Investments in tangible fixed assets at £26,586 (2010: £32,463) were more than offset by depreciation of £50,169 (2010: £32,533) resulting in their net

book value, calculated on an historic cost basis, falling to £2,246,860 (2010: £2,270,443). The decision of the Pye Trust to forgive a loan of £75,000 for the building refurbishment project (£50,000 in 2010 and the £25,000 in 2011) was a welcome retrospective contribution to the cost of the refurbishment work completed in 2009.

As a result of the deficit for the year, total net assets fell to £1,985,751 (2010: £2,064,297). With investments maintained at a similar level to the previous year, the main change apart from the fall in the value of tangible fixed assets was a further reduction in current assets to £202,916 (2010: 258,846), with an increase in current debtors offsetting a larger fall in the value of cash at bank and in hand. There was slight fall in creditors falling due within one year to £387,994 (2010: £388,833), although the amount of this represented by deferred income due to pre-financing of EU-funded projects increased to £219,714 (2010: £146,000).

Investment income including interest received totalled £11,198 (2010: £16,348). Investment income was affected by the economic downturn and by asset sales required in 2010.

Day-to-day (working) reserves fell further to £88,891 (2010: £143,854). This represents only 7.5% of expenditure (2010: 10.5%), significantly below the 33% (120 day) target set by Trustees. The level of free reserves (including Triodos Bank mortgage (£350,000) and restricted funds (£43,173)) held by the charity at the year end was negative £304,282 (2010: negative £206,146). The Council Members consider that the day-to-day reserves are not sufficient. While the risk of a sudden drop in income may be low, due to the 3-5 year terms of most of the research contracts, the trustees and executive director are acutely conscious of the need to address this problem. The Council is exploring means by which capital value might be released from fixed assets in order to meet long term liabilities and restore reserves.

### 2012 outlook

Despite successes in obtaining new project funding, the outlook for 2012 remains challenging. The budget for 2012 foresees a reduction in research and project funding income as some projects come to an end. The loss of governmental advisory contracts in England and Wales is also having a significant impact on our work and financial position. However, prospects for an overall increase in voluntary donations are good, and we continue to make significant efforts on bidding for new projects. Therefore although a lower proportion of funding is guaranteed at the start of the financial year, we are making every effort to achieve a break-even trading result in 2012.

*Nicolas Lampkin, Executive Director and Company Secretary*

### Auditor's report

In our opinion the accounts give a true and fair view of the state of the charitable company's affairs as at 31 October 2011 and of its incoming resources and application of resources, including its income and expenditure, for the year then ended. The accounts have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice and have been prepared in accordance with the requirements of the Companies Act 2006. The information given in the Council Members' report is consistent with the accounts.

*Mr Mark Cummins FCCA*  
(Senior Statutory Auditor)  
for and on behalf of  
Russell New Limited, Statutory Auditors

### Approval of accounts

The accounts were approved by the Annual General Meeting of the Progressive Farming Trust on 22 May 2012. Full audited accounts are available for inspection at the Trust's registered office (see page 3) and on the Charity Commission website.



## Statement of financial activity for year ended October 2011

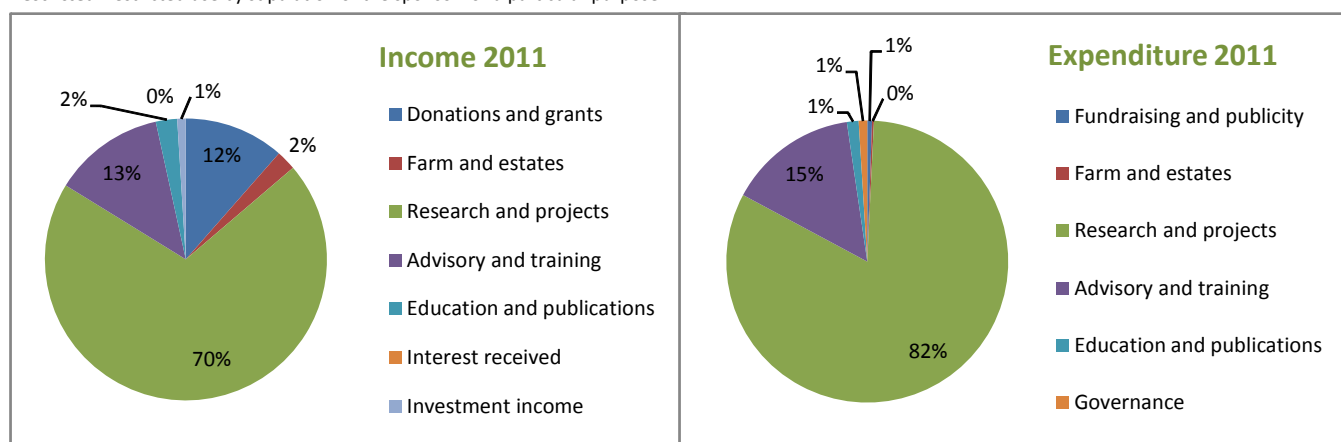
Values (£)	Funds	Unrestricted	Designated	Restricted	Total (2011)	Total (2010)
<b>Incoming resources</b>						
Donations and grants		128,108	-	-	<b>128,108</b>	186,714
Farm and estates		25,910	-	-	<b>25,910</b>	50,274
Research and projects		12,314	-	771,192	<b>783,506</b>	727,183
Advisory and training		40,569	-	102,754	<b>143,323</b>	168,022
Education and publications		-	-	27,152	<b>27,152</b>	41,094
Interest received		-	-	-	-	-
Investment income		11,198	-	-	<b>11,198</b>	16,348
Sundry		-	-	-	-	-
<b>Total</b>		<b>218,099</b>	-	<b>901,098</b>	<b>1,119,197</b>	<b>1,189,635</b>
<b>Resources expended</b>						
Fundraising and publicity		6,412	-	-	<b>6,412</b>	64,159
Farm and estates		2,622	-	-	<b>2,622</b>	12,327
Research and projects		211,380	3,459	762,505	<b>977,344</b>	995,124
Advisory and training		69,994	-	107,030	<b>177,024</b>	227,239
Education and publications		1,430	-	14,575	<b>16,005</b>	55,798
Governance		11,590	-	-	<b>11,590</b>	14,233
<b>Total</b>		<b>303,428</b>	<b>3,459</b>	<b>884,110</b>	<b>1,190,997</b>	<b>1,368,880</b>
<b>Net incoming/outgoing resources</b>						
Before transfers		( 85,329)	( 3,459)	16,988	<b>( 71,800)</b>	( 179,245)
Gross transfers between funds		( 26,185)	-	26,185	-	-
Gain/loss on investment assets		( 6,746)	-	-	<b>( 6,746)</b>	22,418
<b>Net movement in funds</b>		<b>( 118,260)</b>	<b>( 3,459)</b>	<b>43,173</b>	<b>( 78,546)</b>	<b>( 156,827)</b>

Notes: Income and expenditure are divided into project funds in three categories:

**Unrestricted:** without stipulation on use.

**Designated:** where the charity itself restricts use to a particular purpose.

**Restricted:** restricted use by stipulation of the sponsor for a particular purpose.



## Balance sheet as at 31st October 2011

	2011	2010
<b>Fixed assets</b>	<b>2,520,829</b>	<b>2,544,284</b>
of which Land (historic cost)	750,000	750,000
Buildings (historic cost)	1,496,860	1,520,443
Investments (market value)	273,969	273,841
<b>Current assets</b>	<b>202,916</b>	<b>258,846</b>
of which Stocks	7,186	4,805
Debtors	190,820	162,354
Cash at bank/in hand	4,910	91,687
<b>Creditors</b> amounts due within 1 year	<b>( 387,994)</b>	<b>( 388,833)</b>
<b>Net current liabilities</b>	<b>( 185,078)</b>	<b>( 129,987)</b>
<b>Total assets less current liabilities</b>	<b>2,335,751</b>	<b>2,414,297</b>
Amounts falling due after one year	350,000	350,000
<b>Net assets</b>	<b>1,985,751</b>	<b>2,064,297</b>
of which Restricted	43,173	0
Designated	99,537	102,966



## Factfile

### Resources

#### New grants/contracts

*Organic farm incomes in England and Wales.*

Defra-funded project led by Aberystwyth University, 2010-12. Value to ORC £6k.

*Use and efficiency of public support measures addressing organic farming in the EU.*

DG Agriculture-funded research project led by von Thuenen Institute, Braunschweig, 2010-2011. Value to ORC £36k.

*The potential for extending economic farm-level benchmarking to environmental and other aspects of farm performance.*

Defra-funded research project with 5 partners led by ORC, 2010-2011. Value to ORC £9k.

*Evaluation des Bereichs Forschung und*

*Entwicklung im Bundesprogramm Ökologischer Landbau.* Bundesanstalt fuer Landwirtschaft und Ernährung, Bonn funded research evaluation project led by INTERVAL GmbH, Berlin, 2011-12. Value to ORC £87k.

*Greenhouse Gas Platform: Data synthesis, modelling and management.* Defra-funded research project led by ADAS, 2010-2015. Value to ORC £206k.

*Sustainable organic and low input dairying (SOLID).* EU-funded research project led by Aberystwyth University with 26 partners, 2011-2016. Value to ORC £395k.

*Improved contribution of local feed to support 100% organic feed supply to pigs and poultry (ICOPP).* Defra-funded for UK work as part of the Core Organic II programme, led by Aarhus University, Denmark. 2011-2014. Value to ORC £48k.

*Reduced tillage and green manures for sustainable organic cropping systems (TILMAN-ORG).* Defra-funded for UK work as part of the Core Organic II programme, led by FIBL, Switzerland, 2011-2014. Value to ORC £40k.

#### Continuing statutory funders

Defra (LINK projects)

Natural England (OCIS England to March 2011)

Welsh Government (Organic Centre Wales, OCIS Wales, Farming Connect)

European Commission (Research projects)

#### Individual donors/supporters

I Alexander; F Astor; R Baddeley; C Clarkson Webb; P Conford; R Crowder; Mrs De Wart; R Ewbank; AM Fright; J&A Gear; E Goff; P Kearney; W Kendall; Dr Kunz; T Latter; B Panvel; W&L Pope; R Rowlands; A. Sandwith; S Sarikhani; R Tandy; Mrs Thatcher; R Unwin.

#### Trusts and companies

David Alston Suffolk Ltd; Ashden Trust; Bielenberg Trust; Birthday Trust; Cuthbert Horn Trust; Doves Farm Foods; Paget Trust; Partridge Foundation; Polden-Puckham Charitable Foundation; Pye Family Trust, RIBA University of Reading; Triodos Bank.

### Human resources

#### New staff

Pam Bijak, Administrative Officer;

Anja Vieweger, Researcher;

Katharine Leach, Senior Livestock Researcher

#### Staff leaving

Bob Winfield, Education officer (retired)

#### Interns, students and volunteers

**Research:** Anne Boissard, France; Alban Cholvy, France; Canelle Clement, France; David and Balazs Kovacs; Lucie Legroux, France; Erika Lieder, Germany; Sophie Lewis, UK; Polly

McAdam, USA; Martina Niggli, Switzerland; Katrin Otto, Germany; Sarah Waterfield, UK  
**Library:** R Newby; R Hotchkis; C Sreeves

#### Postgraduate students (co-supervised by ORC)

**PhD:** Robert Brown, University of Reading; Alexa Varah, University of Reading; Kevin McCormack, SAC Edinburgh; Laura Hathaway-Jenkins, Cranfield University, Sascha Kirchner, University of Helsinki, Finland.

**MSc:** Samuel Knapp, John Innes Centre

#### Project Partners

**Research UK:** Aberystwyth University (IBERS and Organic Centre Wales); ADAS; Agri-Food and Biosciences Institute (AFBI); Centre for Ecology and Hydrology; Centre for Environmental Data Archival; Cranfield University; Duchy College; FAI Farms; Garden Organic; James Hutton Institute; John Innes Centre; Met Office; NIAB/TAG; National Physical Laboratory; Rothamsted Research; Rural Business Research; Scottish Agricultural College; University of Aberdeen; University of East Anglia; University of Gloucester (CCRI); University of Nottingham; University of Reading; Warwick University.

**Industry:** Abacus Organic Services Ltd; Bernard Matthews Foods Ltd; Bluebell Farms Ltd; Bread Matters Ltd; British Oat and Barley Millers Association (BOBMA); Calon Wen; Causey Park Farms Ltd; CPB Twyford Ltd.; Crispington Malting Group Ltd; DairyCo; Doves Farm Foods Ltd; Duchy Home Farm; DuPont (UK); East Haydon Farm; EBLEX; Farmeco Ltd; Fen End farm; Garfords; Grange Farm; GBSeeds; Halo Foods Ltd; HGCA; Institute of Organic Training and Advice (IOTA); John Deere; J E Wardle and Sons; Lavenham Lodge; LEAF; Letheringsett Watermill; Mole Valley Feed Solutions; New Houses Farm; Nairns Oatcakes; Nickerson-Advanta Ltd; Norton Organic Grain Ltd; Oat Services Ltd; Organic Milk Suppliers Co-operative (OMSCO); Organic Arable; Organic Farmers & Growers Ltd; Organic Seed Producers Ltd; Panary Ltd; Phytatec; Poplar Farm; RAGT Seeds Ltd; Rushall Farms; SAC Commercial Ltd; Scottish Organic Producers Association; Senova Ltd; Shipton Mill Ltd; Soil Association Certification Ltd; Soil Association Ltd (Charity); Stormy Hall Seeds; South Elmham Hall; Tillet and Hague Technology; W & H Marriage & Sons Ltd; Wakelyns Agroforestry; Whitehall Farm; Wimpole Hall farm.

**The participatory research engagement of many individual producers is particularly appreciated as is the participation of consumers in choice experiments.**

**Overseas partners and affiliates:** Agencia Estatal Consejo Superior de Investigaciones Cientificas (ES); Agricultural Research Institute of the Hungarian Academy of Sciences (HU); Agrifood Research (MITT, FI); Agricultural Dairy Cooperative of Anogea (Proodos, GR); Agroscope Reckenholz-Tänikon Research Station (CH); Agrovegetal (ES); Arcoiris (IT); Andalusian Federation of Associations of pure-bred Goat (Cabrandalucía, ES); Aristotelio Panepistimio Thessalonikis (GR); Associazione Italiana per l'Agricoltura Biologica (AIAB, IT); College of the Atlantic (Maine, USA); Coordination Nationale des Organisations Paysannes du Mali (Mali); Czech University of Life Sciences, Prague (CZ); Commission of the European

Communities – Directorate General Joint Research Centre (JRC, ES); Ecological Plant Breeding (EU); Ege University, Izmir (TK); Escola Superior Agraria de Coimbra (PT); FIBL – Research Institute of Organic Agriculture (CH); Gautier Semences (FR); Getreidezüchtung Darzau (DE); ILVO– Eigen vermogen van het Instituut voor Landbouw en Visserijonderzoek (BE); Instituto de Agricultura Sostenible (ES); Institute for Ethical and Environmental Certification (ICEA,IT); Institut National de la Recherche Agronomique (INRA, FR); INRA Transfert (FR); Institute technique de l'Agriculture Biologique (FR); INTERVAL GmbH (D); Institute of Food and Research Economics (DK); Institute for Marketecology (IMO, CH); International Committee for Animal Recording (ICAR, IT); Institutul National de Cercetare-dezvoltare Pentru Biologie si Nutritie Animala (RO); Instituto de Tecnologia Quimica e Biologica (PT); International Center for Agricultural Research in the Dry Areas (INT); International Centre for Research in Organic Food Systems, International Federation of Organic Agriculture Movements EU Group, Brussels (EU); Johann Heinrich von Thünen-Institute (DE); Juvan Luomu Ltd (FI); Leibniz-zentrum für Agrarlandschaftsforschung (ZALF) e.V (DE); Lacto Solomonescu (RO); Lithuanian Institute of Agrarian Economics (LI); Louis Bolk Instituut, Driebergen (NL); Mediterranean Agronomic Institute, Bari (IT); Mekelle University (Ethiopia); Murphy-Bokern Konzepte (D); Polytechnic University of Marche (IT); RISØ National Laboratory for Sustainable Energy (DK); Saatzzucht Donau (AT); Scuola Superiore Sant'Anna, Pisa (IT); Swedish University of Agricultural Sciences (SE); Technical University of Munich (DE); Thiese Dairy Co (DK); University of Aarhus (DK); University of Applied Sciences (D); Universiteit Gent (BE); University of Helsinki (FI); University of Hohenheim (DE); University of Kassel (DE); Università Politecnica delle Marche (IT); University of Perugia (IT); University of Natural Resources and Applied Life Sciences (BOKU), Vienna (AT); Universitat de Barcelona (ES); Wageningen UR, (NL); Wim Govaerts & Co CVBA (BE).

### Outputs

#### Publications

**4 issues (103-106) of the ORC Bulletin were published during the year, including many articles from ORC staff which are not itemised in the following list of publications.**

ADAS, AEA, AHDB, AIC, CLA, FWAG, LEAF, NFU, NIAB/TAG, ORC, RASE (2011) *Meeting the Challenge - Agriculture Industry GHG Action Plan*, Stoneleigh.

**Döring TF** (2011) Potential and limitations of plant virus epidemiology: lessons from the Potato virus Y pathosystem. In: Santala J & Valkonen JPT (eds). *Abstracts of the 18th Triennial Conference of the European Association for Potato Research*. 24-29 July 2011, Oulu, Finland, p34.

**Döring TF, Crowley O, Wolfe M** (2011) Against the grain. *Organic Farming* 107:42-43.

**Döring TF, Kirchner SM, Skorupski P, Hardie M.** (2011) Spectral sensitivity of the green photoreceptor of winged pea aphids. *Physiological Entomology* 36:392-396.

**Döring TF, Pautasso M, Finckh MR, Wolfe MS** (2011) Concepts of plant health – reviewing



- and challenging the foundations of plant protection. *Plant Pathology* 61:1-15.
- Döring TF**, Chittka L. (2011) How human are insects, and does it matter? *Formosan Entomologist* 31:85-99.
- Döring TF** (2011) Organic seed and the conservation of plant genetic resources – a call for vigilance. 17<sup>th</sup> IFOAM Organic World Congress: Organic Seed Preconference. Heuksalim Institute, Cheongwon-gun, Korea, 26-27 September 2011. pp.195-197.
- Döring TF**, Kovacs G, Wolfe MS, Murphy K (2011) Evolutionary plant breeding in cereals – into a new era. *Sustainability* 3:1944-1971.
- Fleming D, Chamberlin S** (2011) Tradable Energy Quotas: a policy framework for peak oil and climate change. [www.teqs.net](http://www.teqs.net).
- Gerrard CL, Smith LG, Padel S, Pearce B, Hitchings R**, Measures M, Cooper, N (2011) *OCIS Public Goods Tool development*. Report for Defra, Organic Research Centre, Newbury.
- Hathaway-Jenkins LJ, Sakrabani R, Pearce B**, Whitmore AP, RJ Godwin (2011) A comparison of soil and water properties in organic and conventional farming systems in England. *Soil Use and Management* 27:1-10.
- Hathaway-Jenkins LJ** (2011) *The effect of organic farming on soil physical properties, infiltration and workability*. EngD Thesis, Cranfield University, Bedford.
- Kirchner SM, **Döring TF**, Hiltunen LH, Virtanen E, Valkonen JPT (2011) Information theory-based model selection for determining the main vector and period of transmission of Potato virus Y. *Annals of Applied Biology* 159:414-427.
- Kirchner SM, Hiltunen LH, Ketola J, Kankaala A, Virtanen E, **Döring TF**, Valkonen J (2011) Efficacy of straw mulch, insecticides, mineral oil, and birch extract in controlling Potato virus Y in Finnish seed potato production. In: Santala J, Valkonen JPT (eds): *Abstracts of the 18th Triennial Conference of the European Association for Potato Research*. 24-29 July 2011, Oulu, Finland, p. 156.
- Lampkin N**, Measures M, **Padel S** (2011) *2011/12 Organic Farm Management Handbook*. Organic Research Centre, Newbury.
- Lampkin N** (2011) Relevance of OECD agri-environmental measures for PES. In: Ottaviani D, Scialabba, N el-H (eds.) *Payments for Ecosystem Services and Food Security*. Food and Agriculture Organisation, Rome. pp45-67.
- Lampkin N**, Bailey A, Lang B, Wilson, P, Williams A, Sandars D, Fowler S, **Gerrard C**, Moakes S, Mortimer S, Nicholas P, **Padel S** (2011) The potential for extending economic farm-level benchmarking to environmental and other aspects of farm performance. Unpublished report to Defra. ORC, Newbury.
- Moakes S, **Lampkin N** (2011) Organic Farm Incomes in England and Wales 2009/2010. Aberystwyth University and ORC, Newbury.
- Naspetti S, **Lampkin N**, Nicholas P, Stolze M, Zanolli R (2011) Organic supply chain collaboration: a case study in eight EU countries. *Journal Food Products Marketing* 17:141-162.
- Odefey L, Berner A, Offermann F, **Gerrard C**, **Padel S**, **Lampkin N** (2011) Organic farming: implications for costs of production and provisioning of environmental services. Unpubl. deliverable 7.3 of FACEPA project.
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- Events organised**
- Organic Producer Conference (Jan-11)
- Eco-agroforestry workshop: *Trees on Farms: Integrating agriculture and forestry* (Mar-11)
- Greenhouse Gas Platform workshop: *End User Requirements* (Mar-11)
- ORC/BES conference: *Functional biodiversity on organic farms* (May-11)
- ORC Research Open Day (Jun-11)
- National organic farming policy evaluation workshop (Jun-11)
- Farm Woodland Forum Annual Conf. (Jun-11)
- ORC Organic and Local Food Festival, Elm Farm (Jul-11)
- ORC Participatory Research and Demonstration Network launch (Jul-11)
- Greenhouse Gas Platform: Northern Ireland Stakeholder workshop (Jul-11)
- ECO-PB international workshop on seed regulation (Sep-11)
- Farming Systems Assessment Methodology project economic indicator workshop (Sep-11)
- UK Policy Forum, Elm Farm (Oct-11)
- Certcost UK stakeholder workshop (Oct-11)
- Events contributed to**
- Biofach Congress, Nürnberg, Germany. (Feb-11)
- Meeting on reducing greenhouse gas emissions from agriculture, The Royal Society. (Feb-11)
- Soil Association Conf., Manchester (Feb-11)
- Greenhouse Gas Action Plan Launch, Palace of Westminster (Apr-11)
- Cereals 2011 (May-11)
- OF&G Organic Cereals Event, Cambs. (Jul-11)
- 18th Triennial Conference of the European Association for Potato Research. Oulu, Finland (Jul-11)
- Government Policies for the Promotion of Organic Agriculture - Focus on the Asian Pacific Region, South Korea (Sep-11)
- IFOAM Organic World Congress, South Korea (Sep-11)
- Third Scientific Conference of ISOFA, South Korea (Sep-11)
- Soil Association Horticultural Symposium, Bristol (Oct-11)
- Selling organic: Building Partnerships (Oct-11)
- Organic Centre Wales conference (Oct-11)
- Directorships, Memberships of Boards/Government Committees**
- Döring T** Fellow, Royal Entomological Society
- Hitchings R** Pool member, EC Expert Group for Technical Advice on Organic Production
- Hitchings R** Member, Welsh Government Horticulture Strategy Group
- Hitchings R** Secretary, Organic Growers Alliance
- Lampkin N** Perm. member, EC Expert Group for Technical Advice on Organic Production.
- Lampkin N** Member, Welsh Government Food and Drink Advisory Partnership
- Lampkin N** Chair, Welsh Government Organic Strategy Group
- Lampkin N** Member, Defra/Natural England Agri-environment Stakeholders Group
- Lampkin N** Director, Hybu Cig Cymru
- Lampkin N** Director, Institute of Organic Training and Advice
- Lampkin N** Member, Agricultural Industry Greenhouse Gas Action Plan Steering Group
- Padel S** Member, Steering Group, Better Organic Business Links Programme, Organic Centre Wales
- Padel S** Member, Steering Committee of the EU Technology Platform 'TP organics'
- Padel S** Pool Member, EC Expert Group for Technical Advice on Organic Production
- Pearce B** Member, Royal Horticultural Society Science and Horticultural Advice Committee
- Pearce B** Director and Member of Management Committee, GM Freeze
- Pearce B** Pool Member, EC Expert Group for Technical Advice on Organic Production
- Pearce B** Member, IFOAM EU Poultry Group
- Smith J** Member, Farm Woodland Forum Executive Committee
- Smith L** Member, Parliamentary Renewable and Sustainable Energy Group
- Smith L** Member, Round Table for Organic Agriculture and Climate Change
- Smith L** Member, Greenhouse Gas Action Plan for England Steering Group
- Woodward L** Director, Future Sustainability Ltd
- Woodward L** Director, Organic Arable
- Woodward L** Director, Organic Seed Producers
- Wolfe M** Hon. member, British Society for Plant Pathology
- Wolfe M** Director, East Anglia Food Link

