



Annual Report

November 2011 - October 2012





The Object for the Progressive Farming Trust, trading as the Organic Research Centre (ORC), 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 abroad.

ORC is committed to developing sustainable land management and food systems based on IFOAM organic and agroecological principles, compiling evidence, disseminating knowledge and informing public debate, in order to ensure the health and wellbeing of soil, plants, animals, people and the environment.

Since its establishment in 1980, ORC has played a central role in the development of UK and EU organic food and farming research, policy and standards. In the next few years, we want to see:

- organic/agroecological approaches widely recognised as relevant to sustainable food production;
- a wider range of agro-ecosystem management practices and renewable resources used by all producers, organic and non-organic;
- more organic producers adopting best practice, leading to improvements in minimum standards;
- greater food industry and retailer engagement with organic/agroecological approaches;
- a positive government policy environment to support the development of the organic sector.

To achieve this, we are working to strengthen our position and effectiveness as the leading independent UK research and development institution for organic/agroecological food and farming, by:

1. Developing ORC's research programme on organic/agro-ecological approaches to farming and land management for the sustainable production of food, energy and ecosystem services in order to:
 - a. Improve the productivity and sustainability of such approaches and address key technical problems where current practice falls short of organic/agroecological 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 wellbeing.

2. Developing ORC's information and education services to:
 - a. Communicate organic principles and best practice and disseminate technical and market information to producers, consultants, food businesses and others, so as to improve both business performance and the delivery of public goods.
 - b. Educate and inform students, schoolchildren, consumers and civil society more generally about the issues affecting the sustainability of primary food/energy/fibre production.
 - c. Engage with the media on relevant food, farming and sustainability issues.
3. Engaging with policy-makers at local, national and international level in order to:
 - a. Facilitate the sound development of the organic sector, primarily in the UK, but also internationally.
 - b. Ensure that the potential of organic/agroecological approaches is recognised in climate change, food security, biodiversity, animal health and

welfare, food quality and health, and agri-environmental/rural development policy debates and that appropriate policies are developed.

4. Developing ORC's administration and governance systems, and its farm and estate, to support these activities.

Public benefit

The Charities Act 2011 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 Charity Commission's current 13 areas of potentially relevant public benefit purposes, our work supports the advancement of education, health, environmental protection and improvement and animal welfare (through research into improved livestock systems).

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



Trustees (Council of Management)

Christopher Bielenberg (to May 2012)
 Alice Astor
 Alexander Bielenberg (to May 2012)
 Roger Harrison
 Andrew Jedwell
 Jennifer Jones
 Jeanette Longfield MBE
 James Skinner
 Mike Turnbull (from May 2012, Chair)
 Prof. Hardy Vogtmann (to Dec 2011)
 David Wilson

Patrons

Christopher Bielenberg
 The Countess of March and Kinrara
 Peter Kindersley
 Juliet Kindersley
 The Lord Poole
 Yvonne Pye
 Jan Sundt
 Prof. Dr. Hardy Vogtmann

Investment advisors

Newton Investment Management Limited, The Bank of New York Mellon Centre, 160 Queen Victoria Street, London EC4V 4LA

Bankers

Triodos Bank, Deanery Road, Bristol BS1 5AS
 CAF Bank Limited, P.O. Box 289, West Malling, Kent ME19 4TA
 National Westminster Bank Plc, City of London Office, 1 Princes Street, London EC3P 3AR

Senior Staff

Executive Director and Company Secretary: Prof. Nicolas Lampkin

Deputy Director:

Dr Bruce Pearce

Principal Scientific Advisor:

Prof. Martin Wolfe

Principal Policy Advisor:

Lawrence Woodward OBE

Registered office:

The Progressive Farming Trust Ltd (t/a The Organic Research Centre)
 Elm Farm
 Hamstead Marshall
 Newbury
 Berkshire
 RG20 0HR

Tel: +44 (0)1488 658298

Fax: +44 (0)1488 658503

Charity number: 281276

Company number: 1513190

Front cover: Prof. Martin Wolfe and Jo Smith demonstrating ORC's focus on eco-agroforestry at Elm Farm (Photo: Phil Sumption)

Chair's report

This is my first annual report since taking on the role of Chair of the Council of Management in May 2012.

I would like to start by acknowledging the enormous contribution made to the Charity by my predecessor, Christopher Bielenberg, who served as Chair since the foundation of the Charity in 1980.

I would also like to acknowledge the equally significant contribution made by another founding Trustee and sometime President of the organisation, Prof. Dr Hardy Vogtmann, who retired as a Trustee earlier in the year.

I'm very pleased that both have agreed to continue supporting the Charity as Patrons. Alexander Bielenberg also retired as a Trustee during the year.

Coming from a background in government and management of public organisations, and more recently as Chair of Tree Aid and the International Tree Foundation, my background has not been as steeped in organic farming as that of my predecessor, and I have been on a steep learning curve during the year.

I have been impressed with the scope of activities undertaken by the ORC, and by the engagement and professionalism of the staff in tackling the challenges faced by the organisation and in initiating new activities.

There have been some significant achievements during the year. Several new projects were started. Many are funded by the EU, including OSCAR and CO-FREE, which aim to improve organic cropping and apple production systems, and an evaluation of the EU's organic regulations.

Funding from the Swedish Ekhaga Foundation has also helped us to explore the concept of health applied to agricultural systems – a key part of the holistic thinking behind organic/agroecological approaches.

Other projects were completed, including CERTCOST and the evaluations of EU organic support policies and German organic research.

These projects are having a direct impact on policy-making at European and national level in many countries.

ORC's policy work is supported by the engagement of staff in several government advisory committees.

The Defra-funded Legume LINK project was also completed during the year. This multi-partner project led by ORC has generated some valuable results on the potential of a broad range of legumes for UK agriculture, contributing to nitrogen fixation, soil fertility and supporting pollinators – a valuable result at a time when bee populations are under real pressure.

Project bidding and fundraising efforts have paid off, with voluntary donation income up after a series of years of decline and several new projects funded to start in 2013, including:

- a major European project on organic plant breeding (COBRA) led by ORC with the UK work funded by Defra;
- an Interreg-funded project on deriving energy and biodiversity benefits from landscape elements such as hedgerows (TWECOM), with the UK part of the work also funded by the Ashden Trust;
- a Welsh government-funded, ORC-led project, with Organic Centre Wales partners ADAS and Aberystwyth University, to advise the Welsh Government on policy issues and communication with the Welsh organic sector.

Despite these achievements, we also faced significant challenges during the year. We did not succeed in obtaining the funding for short-term projects starting in 2012 that we had anticipated, and we were unsuccessful in the bidding round for EU FP7-funded projects due to start in 2013.

This has had a significant impact on total income raised and our growth projections for 2012 and 2013, and resulted in a substantial loss in 2012.

While we have succeeded in generating sufficient committed income to make a break-even result in 2013 possible, we will need to address liquidity issues through fixed asset restructuring and we will need to ensure that future income generation enables us to return to a surplus position by 2014.

I am confident that the Charity and its staff and Trustees are up to this challenge.

Mike Turnbull

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/agroecological 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 human health and wellbeing. The results of our research are available in the public domain.

Crops & agroforestry 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.

ORC is playing a leading role in European efforts to adapt plant breeding to meet the needs of organic producers.

Our radically different approach is based on genetically diverse populations, not uniform varieties.

The benefits include improved resilience in the face of challenging weather conditions.

We are working to secure changes to seed marketing regulations to enable wider use of populations.

For this purpose Composite Cross Populations (CCPs) are being trialled in both replicated field experiments and on-farm trials. 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.

Assessing oat varieties for organic farming: *QUOATS*

This Defra- and industry-funded LINK project on oat breeding (*Harnessing new technologies for sustainable oat production and utilisation*) 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.

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 and 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.



Oat variety trial at ORC Wakelyns



Legume All Species Mix at Yatesury

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).

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

Many low-input systems rely on a legume-based fertility-building ley as an alternative to mineral nitrogen applications, but the full potential of diversity in legume species mixtures has not been exploited.

In this Defra- and industry-funded, multi-partner project, led by ORC and completed in 2012, we investigated how increased species diversity in the ley phase of the rotation can help to improve the nitrogen use efficiency.

We collected data on the growth characteristics and agronomic properties of 12 legume species across a wide geographical range in order to make targeted recommendations on which legume species to include in the rotation, depending on farm location.

From this, we created a legume-based species mixture that is expected to have higher resilience and multi-functionality in terms of fertility building, support of biodiversity, weed suppression, and nitrogen release dynamics compared to traditional grass/clover mixtures.

The Ecodyn tool features in both the TILMAN-ORG and OSCAR projects

Reduced tillage and weed control: TILMAN-ORG, OSCAR & Oilseed rape

Ensuring successful weed control without herbicides and reducing reliance on mechanical cultivations to protect soils and reduce energy use are often conflicting objectives. We are addressing this in new

projects started, as well as one completed, in 2012.

ORC is contributing to a European Core Organic 2 Eranet project on reduced tillage in organic farming (TILMAN-ORG), continuing an on-farm trial on reduced tillage using the Ecodyn tool (see photo) in collaboration with Duchy Home Farm and the Institute of Organic Training and Advice. The aim is to develop cropping systems with higher energy efficiency, improved soil conservation and better resilience to water stress.

ORC is also part of an EU FP7-funded project 'optimising subsidiary crop applications in rotations' (OSCAR). This aims, in both organic and conventional systems, to increase the duration of soil coverage by plants, to introduce diversity to the crop rotation and to reduce the need for and the intensity of soil tillage. It runs from 2012 to 2016 and is led by the University of Kassel, Germany. ORC leads the dissemination activities and will develop a toolbox for using cover crops and living mulches.

In an HGCA-funded project on new approaches to weed control in *oilseed rape*, led by NIAB/TAG and completed in 2012, ORC assessed the use of vision-guided hoes to control weeds without the use of herbicides.



Eco-agroforestry: integrating agriculture, forestry & biodiversity

This project, part-funded by the Ashden Trust, ended in 2012. Its aim was to promote the integration of agroforestry with organic/agro-ecological principles, improving the output of food and fuel while also enhancing biodiversity.

Linked to this project, our Reading University CASE Award PhD student, Alexa Varah, completed her first season of fieldwork investigating the public goods and services that agroforestry can provide on six agroforestry sites across England.

As a result of the progress made, the Ashden Trust agreed match funding for a new project investigating the potential for biofuels from hedgerow management starting in 2013.

ORC is at the forefront of UK agroforestry research and policy development. Thanks to support from the Ashden Trust, we have:

- published reviews of the evidence on, and the potential for, temperate agroforestry systems;
- secured funding for new research projects;
- prepared policy position papers to engage with the CAP Reform debate;
- supported the development of the European Agroforestry Federation and UK networks;
- initiated discussions to include agroforestry as part of future UK agri-environment schemes.

Innovative strategies for copper-free low-input and organic farming systems: CO-FREE

The aim of this new EU FP7-funded project, led by the Julius-Kuhn Institute in Darmstadt, Germany, is to develop strategies to replace copper-based products as plant protection products in low-input and organic farming systems.



ORC's main role is to evaluate the potential and limitations of agroforestry-based apple production systems as a sustainable strategy for replacing copper inputs. We are using Wakelyns Agroforestry as a case study in years 1-2, and a large scale apple agroforestry system at Whitehall Farm in years 3-4. The project runs from 2012 to 2016.

Livestock research

(Team Leader: Dr Bruce Pearce)

This programme covers both ruminant and non-ruminant livestock. 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.

The first stage of the project involved the assessment of sustainability issues on organic dairy farms. This required adaptation of the ORC Public Goods tool (see below) for the rapid assessment of the sustainability of cattle and goat dairy farms across ten countries, ranging from the Mediterranean to Finland and from Wales to Romania. ORC assessed 19 farms in the UK and compiled the overall report.

ORC is developing participatory research projects with UK dairy producers. In 2012, we initiated the first two projects on increasing sward diversity for grazing on dry soils; and on rearing dairy calves on their mothers. ORC is responsible for co-ordination between project partners implementing participatory projects in other countries.

We are also investigating the potential of agroforestry for dairy farms. The new agroforestry trial at Elm Farm was partly replanted in April 2012

following poor establishment due to the dry spring in the previous year.

Microclimate measurements were recorded monthly at both sites, while productivity and nutritional quality assessments of the willow and ley were carried out in the willow agroforestry system at Wakelyns.

ORC is championing the use of participatory approaches in applied agricultural research



ORC researcher Becky Nelder measuring pig performance

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

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

The project aims, through increased knowledge of the characteristics of different local feeds and their impacts, to produce feeding strategies that deliver high animal welfare, financial and environmental performance.

The focus is on the potential of new or under-utilised feeds, roughage supplementation and the role of the range in meeting nutritional needs.

In the first year of the project, we tested algae as an alternative protein source for poultry and lucerne silage with either peas or beans for pigs,

with some encouraging results. The trials will be repeated in the coming year. Work has also been completed on analysing the sources of feed available in the UK.

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.

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 health and sustainability and their contribution to delivery of ecosystem services.

What does health mean in agriculture? – **Health Concepts**

Despite its high profile in agriculture, particularly organic agriculture, the notion of health in agricultural contexts is currently not well defined and is subject to conceptual disagreements. This lack of clarity creates a vacuum in which potentially misleading claims about health benefits can be made. If health in humans, animals, soil and plants is such an important goal organic farming, it needs to be clear what is meant by it.

In April 2012, ORC began leading a 15-month, Ekhaga Foundation-funded international project on developing health concepts for ecological agriculture. The aim is to clarify and critically assess health concepts so as to contribute to a new enlightened vision of health and to identify new routes to improving health in agricultural systems.

Sustainability assessment

The *Public Goods Tool* development continues as part of other research and advisory projects, for example as part of the dairy research project SOLID and of sustainability training for advisors (STOAS).

In the Defra-funded *Farming System Assessment* methodology project led by the Warwick Crop Centre (formerly HRI) at Wellesbourne, ORC continues to contribute 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. Case studies will be used to validate the approach developed.

Greenhouse gases/climate change

The *Agricultural Greenhouse Gas Research Platform* is a research programme funded by Defra and the devolved UK governments. It 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. The Platform 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*. The project aims to synthesise existing and new evidence on GHG emission factors and the effectiveness of mitigating measures, derived from literature reviews and the other partner projects.

The results 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 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 also 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.

Laurence Smith, who leads our GHG work, is undertaking a PhD with Cranfield University that aims to

elmfarm@organicresearchcentre.com

assess the climate change and other environmental implications of large-scale conversion to organic farming in England and Wales. The aim is to assess the costs and benefits of an organic approach, with a focus on assessments at farm system rather than individual product level. A literature review on environmental impacts of organic farming systems has been completed and a range of modelling compared.

Socio-economic research

(Team Leader: Dr Susanne Padel)

The focus of the socio-economic programme in 2012 was on developing information about markets and consumers, on policy, regulation and research programme evaluations and on the study of financial performance.

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.

ORC's respected, policy-relevant research and policy evaluations feed directly into policy decision-making on:

- CAP reform, rural development and organic regulations in the EU, and
- implementation of agri-environmental and research policy in several countries, including England, Wales and Germany.

Organic market data network

This new EU FP7-funded project, *Data network for better European organic market information*, aims to increase the availability of data and market information in order to improve the transparency of the organic market, through better co-ordination and other improvements of market data collection activities.

ORC has led work on surveying organic market data collectors. This has revealed that while production data such as cropping areas and num-

bers of livestock are quite widely collected, the market data collection effort remains very varied across Europe and the data are not often published. These results will be used to inform subsequent parts of the project including six ORC-led case studies on improving organic market reports.

Evaluation of the German organic research programme: BÖL

This German government-funded project, led by Interval, Berlin, was completed in 2012. It aimed 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.

The evaluation of data from the BLE research project database and an online survey concluded that projects funded under the programme resulted in a compendium of easily accessible results. The relevance of the research to the sector is one of the greatest strengths of the programme, but the consistently high allocation of resources to crops and soil themes, as compared to livestock and socio-economic topics, was a weakness.

A more strategic approach to the identification of research targets, and to the improvement of impact from research outputs, with appropriate measures at both programme and project level, is recommended.

ORC has produced a summary of research commissioned in eight thematic areas which were also published in English, a brief summary of which was published in the Winter 2012 ORC Bulletin.

Evaluation of EU organic legislation for the European Commission

This new 10-month, DG-Agri-funded project, led by the von Thünen Institut in Braunschweig, Germany, started in 2012. The aim of the project is to evaluate the organic farming



regulations introduced in 2008/9 in order to identify positive impacts and issues that need to be addressed in future changes.

ORC's role is to develop an effects model of the regulations, setting out how the key rules on production, labelling, control and trade with third countries contribute to the main goals of the regulation, and in particular organic farming's dual roles of delivering public goods and responding to consumer demand for organic products. ORC is responsible for examining issues related to the scope of the regulations, the production rules and opportunities for simplification. ORC will conduct interviews with UK stakeholders and will contribute to the overall reporting of the project and the development of recommendations to the EU Commission.

Financial performance of organic farming in England and Wales

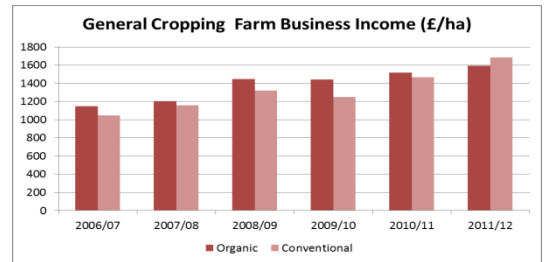
The joint work with Aberystwyth University and Rural Business Research funded by Defra produced a further edition of the annual report on the financial performance of organic farms in England and Wales.

Although organic farms receive higher agri-environment payments per ha than conventional holdings,

the majority of their income originates from livestock and cropping outputs. The report presents detailed data tables for whole farm inputs, outputs and incomes as well as enterprise costs of production.

Funding for this work from Defra has now ended, but we will continue to work with the Soil Association and others to present analyses of the data that is still being collected by the English Farm Business Survey.

The report showed that, as in previous years, the profitability of most organic farm types was higher than or similar to that of comparable conventional farms.



Information services: supporting knowledge exchange

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.);
- 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 what are challenging times, following the ending of several government-funded projects, including the Organic Conversion Information Services in England and Wales, in previous years. Despite the funding reductions, we have succeeded in maintaining a range of activities including advice, education/training events and conferences, as well as our website, bulletin and other publications.

Supporting advisers

The most significant development in 2012 was the integration of the Institute for Organic Training and Advice (IOTA) into ORC from April. IOTA was formed in 2004 to support organic advisers and trainers through the provision of membership, accreditation and professional development services. In taking on IOTA, we are seeking to broaden our research and information dissemination efforts to include all advisers and trainers working in the UK and Ireland.

This has, however, meant that the delivery of commercial advisory services has come to an end, leading to the closure of the Organic Advisory Service (OAS) in March 2012. OAS activity levels were in any case significantly reduced compared with previous years, and withdrawing from the

provision of commercial advisory services means we can operate IOTA impartially with respect to the other consultants that use IOTA services.

In support of our new role with IOTA, we are part of a new EU Leonardo-funded project on 'Sustainability assessment training for organic advisers' (STOAS). The aim is to provide advisers from several countries with the knowledge and tools needed to help producers develop more sustainable systems. ORC's Public Goods Tool is one of the featured approaches, alongside similar tools developed in Switzerland and Germany. The training will be delivered in 2013.

Through IOTA, ORC aims to support all organic advisers working in the UK and Ireland.

Working with producers

During 2012, ORC established its Participatory Research Network (PRN) to encourage more participatory research and innovation projects. The Organic Systems Development Group (OSDG) was disbanded and its members have been encouraged to join the new group.

The PRN is linked to the Duchy Originals Future Farming Programme that started during the year. The programme is run by the Soil Association, with ORC as the lead research partner, and funded by the Prince of Wales's Charitable Foundation thanks to Waitrose sales of organic food under the Duchy Originals brand.

The programme focuses on helping producers develop low-cost, sustainable solutions that rely on management



practices or renewable resources. It is a concerted drive to boost innovation in organic and other low-input farming, aiming to improve productivity and environmental benefits.

ORC's role is to support: a) the identification of research priorities through the PRN; b) the development of producer-led projects and partnerships with relevant researchers; and c) the communication of research results.

We continued to sell the 2011/12 (9th) edition of the Organic Farm Management Handbook, our main publication aimed at producers, which is published with the support of Triodos Bank and Farming Connect in Wales.

The handbook is a source of information for anyone interested in the business of organic farming – covering a broad range of market, certification, policy, financial and technical information on different organic systems and enterprises. A new edition is planned for 2013.

Organic Centre Wales

ORC is a partner, alongside ADAS and Aberystwyth University, in the consortium that operates Organic Centre Wales (OCW). With the loss of the Farming Connect Organic Development Programme during 2011, and the ending of the Welsh Organic Conversion Information Service and core funding for OCW at the end of 2011, the ability of OCW to deliver information services to organic producers and other in businesses in Wales, as it had done since it started in 2000, was brought to an end.

With the closure of the Organic Advisory Service, ORC also ended its engagement with delivery of one-to-one advice under Farming Connect.

The only remaining funded programme in 2012 was the Better Organic Business Links (BOBL) supply chain efficiencies programme. ORC is represented on the BOBL steering group and contributed to studies of community-supported agriculture (CSA) schemes in Wales and alternative feeds for poultry during 2012.

The BOBL contract did enable the OCW website and market bulletin to be maintained, as well as a continued presence at the Royal Welsh Show.

During 2012, the Welsh government issued a tender for the provision of organic services, including advice to the government on the development

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of new policy support schemes, the provision of a website, attendance at agricultural shows and an annual producer survey. ORC successfully led the OCW partnership in a bid for the work, which will enable some OCW services to be re-established in 2013. Advice and training targeting producers will continue to be provided by other agencies through Farming Connect, but with ADAS helping to ensure a joined-up approach.

Producer conferences and events

The 6th ORC Organic Producers' Conference was held at Aston University in Birmingham in January 2012 with the theme 'Developing better organic systems'. The urban setting marked a major departure in venue choice but it was felt that ease of access using public transport outweighed the other attractions of rural venues. The programme was designed to reflect as many concerns and topics as possible and feedback showed that this was achieved successfully, with Miguel Altieri's keynote presentation on agroecology regarded by many as the highpoint of the event.

Engagement with producer groups and sector bodies is key to the success of the event, as is regular sponsorship from Triodos Bank and others. The Institute of Organic Training and Advice held its annual conference at the same time and made a significant contribution to the main event.

A number of other successful events were held during the year, including the Open Day at Wakelyns Agroforestry in June, a number of events for producers and advisers on agroforestry, and a conference on organic poultry production organised jointly with the Soil Association. We hosted the international Round Table for Organic Agriculture and Climate Change Meeting at Elm Farm in February 2012 and organised with the Soil Association a London roundtable event on 'The Future of Agroecology and IAASTD' in March 2012.

Training and education

The Organic Knowledge Partnership (OKP), which includes ORC, Abacus, Duchy College, Garden Organic, the Soil Association and IOTA, submitted a document to Defra setting out the training needs of the organic sector and how these could be met. This highlighted the problems being caused

by the lack of access to information following the closure of OCIS, and included the proposal for an organic knowledge and information hub as conceived in the earlier OCIS review.

The OKP successfully completed the pre-qualification questionnaire (PQQ) stage for Defra's new RDPE-funded vocational training programme (the successor to the regional programmes that ended when the regional development agencies were abolished). The OKP bid unsuccessfully for specific Lots of training delivery when they were advertised later in the year. Efforts are continuing to secure funding for training programmes from a variety of sources.

In the third and final year of the Transatlantic Partnership (TAP), ORC worked 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 aimed at students.

We hosted two interns from the University of Kassel at Wakelyns, Jo Smith visited Maine to hold workshops with CoA students and faculty on agroforestry and to design systems fitting for their conditions, and Nic Lampkin and Bruce Pearce attended and contributed papers to the Food Connections conference held at CoA in the Spring.

ORC staff contributed to courses run by other institutions. Susanne Padel contributed to the Scottish Agricultural College's distance learning MSc and PG-Dip course on organic farming covering marketing and policy topics with on-line presentations and one interactive session for questions. She also presented a series of lectures on 'Principles of agro-enterprise' as part of the Graduate Specialisation Programme in 'Mediterranean Organic Agriculture' at the Bari Institute for Mediterranean Agriculture (IAMB).

Thomas Döring gave a video-lecture on organic plant breeding and seed production to students from Helsinki University in October 2012.

Wider communications

As a research organisation, we do not see our role as a campaigning or membership organisation engaging directly with the public. We rely primarily on the ORC Bulletin, our website and increasingly social media



to make information available on a regular basis.

Our quarterly printed Bulletin and monthly e-bulletin continue to be well received, and there has been a steady increase in the use of our website, Facebook and Twitter. During the year we have also devel-

oped specialist websites for the ICOPP pig and poultry feed project (see above) and for an EU COST Action project on Protected Cropping.

We are working 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.

We continue to support the EU-funded consumer information campaign, match-funded by industry partners and led by Sustain and the Organic Trade Board.

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

We see it as an important part of our work to communicate the results of our research to, and to engage with and influence, policy-makers at local, national and international level in order to:

- *Facilitate the sound development of the organic sector, primarily in the UK, but also internationally;*
- *Ensure that the potential of organic/agroecological 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.*

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

Supporting the development of the organic movement

Facilitating the development of organic producer groups continues to be an ORC 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.

We have continued exploring the potential for better relationships between the major organic charities (Soil Association, Garden Organic and ORC) with a number of new joint projects (e.g. Duchy Originals Future Farming Programme) started and joint events delivered. We have also worked to support alliances of organic organisations, in particular the English Organic Forum and the Welsh Organic Group, and their engagement with government departments and meetings with Ministers.

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.

Since its foundation, ORC has played a central role in the establishment and development of several organic organisations, including:

- **English Organic Forum;**
- **International Federation of Organic Agriculture Movements;**
- **Organic Arable;**
- **Organic Centre Wales;**
- **Organic Group of Wales;**
- **Organic Growers' Alliance;**
- **Organic Milk Suppliers Co-operative;**
- **Organic Seed Producers.**

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 continued as members of the international Food Quality and Health organisation. Our involvement with the European Consortium for Organic Plant Breeding (ECOPB, represented by Thomas Döring) has developed significantly, with ORC taking on the co-ordination role from 2013.

Engagement with the European technology platform for organic food and farming (TP Organics: 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 engaging 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. On genetic modification, we have continued to support GM Freeze (represented by Bruce Pearce) as well as influence the debate through the development of alternative breeding and agroecological 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 and Laurence Smith).



Jo Smith and Martin Wolfe were actively involved with the establishment of the European Agroforestry Federation (EURAF) in December 2011 and Jo Smith co-led the EURAF working group to develop recommendations for CAP reform for the agroforestry measure as well as attending the 1st EURAF conference in Brussels.

Working with government

ORC is 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 2012, with Nicolas Lampkin chairing a sub-group on poultry, the conclusions of which are available in a published report.

Nicolas Lampkin continues as an active member of the Natural England/Defra agri-environment stakeholders group, which has been reflecting on future directions for agri-environment policy in England.

Developing ORC's resources and facilities for the future

During 2012, 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. Further work has been undertaken with the farm tenant to implement the improvement plan agreed in 2011, and support research activity on the Elm Farm site.

A site development options review was commissioned in 2012 and underlined the lack of new development opportunities due to a restrictive local planning environment, but options to refurbish the farmhouse as a training centre will be pursued in 2013.

Further work is needed to improve our IT systems and in particular broadband access. We had identified opportunities to solve current access problems for ourselves and the local community, but these turned out not to be financially viable so alternative solutions are being pursued in 2013.

Developing towards 2016

The detailed activities to be undertaken in support of the 2012-2016 Corporate Plan are set out in the organisation's 2013 Annual Business Plan. In addition to all the research projects and ongoing activities, this plan foresees the expansion of our training activities, linked to the refurbishment of the farmhouse as a training centre, if appropriate funding can be secured.

ORC 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 engagement with end-users is unique. We will continue to develop this approach, with an increased emphasis on working in partnership with other organisations.

Resources secured in 2013

New grants/contracts

Ekhaga Foundation (Sweden) funded project *Investigating Health Concepts in Agricultural Contexts*, 2012-2013. 2 partners, led by ORC, value to ORC £78k.

EU COST Action project F1105: *Towards a sustainable European organic greenhouse production*, 2012-2016. 14 partners, led by Wageningen University, value to ORC £7k.

EU DG-Agri-funded project: *Evaluation of the EU organic farming legislation*, 2012-2013. 4 partners, led by Thünen Institute (Germany), value to ORC £68k.

EU FP7-funded project: *Optimising Subsidiary Crop Applications in Rotations* (OSCAR), 2012-2016. 20 partners, led by University of Kassel (Germany), value to ORC £119k.

EU FP7-funded project: *Data Network for Better European Organic Market Information* (OrgDataNet), 2012-2014. 15 partners, led by Università Politecnica delle Marche (Italy), value to ORC £127k.

EU FP7-funded project: *Innovative strategies for copper-free low-input and organic farming systems* (CO-Free), 2012-2016. 21 partners, led by Julius Kühn-Institut (Germany), value to ORC £75k.

EU Leonardo-funded project: *Sustainability Training for Organic Advisers* (STOAS), 2012-2013. 8 partners, led by the Danish Advisory Service (Denmark), value to ORC £30k.

INTERREG IVB/Ashden Trust-funded project: *Towards Eco-Energetic Communities* (TWEKOM), 2012-2015. 8 partners, led by Regional Landscape Lage Kempen (Belgium), value to ORC £121k.

Prince of Wales's Charitable Foundation/Waitrose-funded project: *Duchy Originals Future Farming Programme* (DOFF), 2012-2015. 2 partners, led by the Soil Association, value to ORC £131k.

Rural Development Programme for England Training Framework: ORC gained recognition in 2 areas: Marketing and supply chain efficiency for agriculture, horticulture & forestry; and Resource use efficiency in agriculture, horticulture and forestry.

Continuing statutory funders

Defra (LINK and other projects)

European Commission DG Research and DG Agriculture and Rural Development (Research and evaluation projects)
German Government (Research evaluation)
Natural England (OCIS/PG Tool)
Welsh Government (Organic Centre Wales)

Individual donors/supporters

I Alexander; S Alexander; C Allen; L Allen; J Atkins; F Astor; J Beagent; C Bielenberg; R Blanc; A Cole; P Conford; S Coppard; Ms P Davies; Mr P Davies; I Lane; R Ewbank; R Gantlett; J & A Gear; E Goff; N Jackson; A Jedwell; T G Jones; P Kearney; N Lampkin; C Lavell; W Kendall; Dr & Mrs Kunz; T Latter; K Leach; Lady March; Rev. Mason; A Morton; D Oldfield; D O'Neill; B Panvel; J Pawsey; J Phillips; W & L Pope; R A Rowlands; J Russell; Mr Sandwith; S Sarikhani; C Sinclair; J Skinner; R Tandy; S Ward; H Whyman; R Winfield; D Wolfe.

Trusts and companies

Richard Body Charitable Trust; Cobb Charity; Copas; Cuthbert Horn Trust; Doves Farm Foods; Ekhaga Foundation; Hamamelis Trust; Hamstead Marshall Village; Hemsworth Farm; Hungerford Environmental Action; Mitchell Trust; Newbury & District Agricultural Society; Norfolk & Suffolk Organic Group; Oakdale Trust; Observer Trust; Paget Trust; Partridge Foundation; Pye Charitable Settlement; Ratcliff Foundation; Spear Trust; Shimpling Park; Jan Sundt & Co.; Constance Travis Charitable Trust; Tinsley Charitable Trust; Turner Charitable Trust; University of Reading; Triodos Bank; Roger Vere Foundation; Wakelyns Agroforestry; Prince of Wales's Charitable Foundation; White Hart Inn; Yorkshire Organics.

Human resources

New staff: Nick Fradgley, Crops Research Assistant, WAF Mark Measures, Director, IOTA

Staff leaving: Pam Bijak, Admin Officer

Interns, students and volunteers

Research: Alev Kir, Turkey; Murielle Ruedy, Switzerland; Alice Dos Santos, France; Mariateresa Lazzaro, Italy; Anais Million Fremillion, France; Soazig Di Bianco, France; Christina Hieronymus, Germany; Dominic Dennenmoser, Germany; Gaelle Fuer, France; Caitlin Fuller, UK. **Library/proof-reading:** Bob Newby; Robert Hotchkis; Chris Sinclair; Corinne Sreeves.

Postgraduate students (co-supervised by ORC). **MSc:** Samuel Knapp (Germany), John Innes Centre. **PhD:** Robert Brown, University of Reading; Alexa Varah, University of Reading; Kevin McCormack, SAC Edinburgh University; Sascha Kirchner, University of Helsinki, Finland.



Financial report

Review of financial position for year ended 31st October 2012

At £990,480, income generated from donations and grants, investments and charitable activities was 11.5% lower than in 2011 (£1,119,197). Income from projects and similar sources fell by 13% to £854,712 (2011: £979,891), representing 86% of total incoming resources (2011: 88%). This decline was due to the ending of some large projects and a failure to gain sufficient replacement projects. In contrast, voluntary and investment income were more stable, with the total income from these sources down by 2.5% to £135,768 (2011: £139,306) following a 31% fall the previous year.

Expenditure at £1,205,704 was up 1% compared with 2011 (£1,190,997). Overall expenditure on charitable activities fell by 3% to £1,136,512 (2011: £1,172,995). Of this, expenditure on research projects fell by 4% to £936,210 (2011: £977,344). Total staff costs increased by 4.5% to £650,696 (2011: £623,227), in part reflecting a temporary increase in administrative staff costs addressed by a redundancy during the year. Fundraising and project bidding costs at £62,533 were up significantly compared to the reported value in 2011 (£6,412) but similar to 2010 (£64,159) – this is due to the omission in 2011 of project bidding costs, which were included in the 2010 report. The expenditure on fundraising and project bidding represents 8% of the £750,839 donations and new project funds raised.

Against a background of similar total expenditure levels, the failure to secure additional project funds led to a substantial deficit for the year. The trading and depreciation deficit (net outgoing resources) increased to £215,224 (2011 deficit: £71,800), continuing a run of earlier deficits. Investment assets however increased in value by £18,395 (2011: £6,746 loss). As a result, the net overall loss for the year (net movement in funds) was £196,829 (2011 loss: £78,546). This deficit was not consistent with the small trading loss budgeted for the year, due to £160,000 lower project income than budgeted.

Investments in tangible fixed assets, at £17,185 (2011: £26,586), were more than offset by depreciation of £49,344 (2011: £50,169), resulting in their net book value, calculated on an historic cost basis, falling to £2,214,700 (2011: £2,246,860).

As a result of the deficit for the year, total net assets fell to £1,788,922 (2011: £1,985,751). With investments down to £243,658 (2011: £273,969), the main change apart from the fall in the value of tangible fixed assets was a substantial reduction in current assets to £51,103 (2011: £202,916), largely due to the reduction in debtors (mainly accrued project income). There was a decrease in creditors falling due within one year to £370,540 (2011: £387,994) as a result of a larger reduction in the amount represented by deferred income due to pre-financing of EU-funded projects to £176,400 (2011: £219,714) and a balancing increase in other creditors.

As a result of the deficit in 2012, our day-to-day reserves fell to negative £75,779 (2011: positive £88,891). The level of free reserves (day-to-day reserves less long-term liabilities and restricted funds) was negative £483,031 (2011: negative £304,282). The Trustees recognise that these reserves are not sufficient to ensure that, in the event of a significant drop in funding, they will be able to continue the charity's activities. However, the risk of a sudden drop in income is low, due to the three to five year terms of most research contracts.

2013 outlook

After a very challenging year when project income expectations were not realised, the prospects for 2013 are significantly improved. A break-even trading budget has been agreed by the Trustees based on confirmed project income and increased donations, a high proportion of which has already been secured. We continue to make significant efforts in bidding for new projects and increasing voluntary donations so that the possibility of a better than break-even outcome exists.

The Trustees are seeking means to rebalance fixed and current assets, by selling fixed assets and investments and by securing additional donations, so that current liabilities can be met without causing liquidity problems. They remain confident that the Charity will remain a going concern for the foreseeable future. In the longer term, the organisation needs to grow its project activity so that more funds are available to cover overhead costs. We are seeking to do this through developing a range of training activities designed to complement our research and replace previous government-funded advisory work.

The accounts were approved by the Annual General Meeting of the Progressive Farming Trust on 12 March 2013. Full audited accounts are available for inspection at the Trust's registered office (see page 3) and on the Charity Commission's website.

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 2012 and of its incoming resources and application of resources, including its income and expenditure, for the year then ended; 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.

In forming our opinion on the financial statements, which is not qualified, we have considered the adequacy of the disclosure to the financial statements concerning the Charity's ability to continue as a going concern. The Charity is budgeting a breakeven position for the year ended 31 October 2013, but the uncertainty over future income streams, reliance upon external borrowings and the challenging economic climate indicate the existence of a material uncertainty which may cast doubt upon the Charity's ability to continue as a going concern. The risks needs to be seen in the context of the fixed asset base of the Charity: as at 31 October 2012 the Charity had net current liabilities of £319,437, tangible fixed assets of £2,458,358 (including land and buildings at a net book value of £2,197,021 which have recently been valued at in excess of £3 million). The financial statements do not include the adjustments that would result if the charity was unable to continue as a going concern. Our opinion is not qualified in respect of this matter.

In our opinion the information given in the Council Members' Report for the financial year for which the accounts are prepared is consistent with the accounts.

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



Statement of financial activity for year ended October 2012

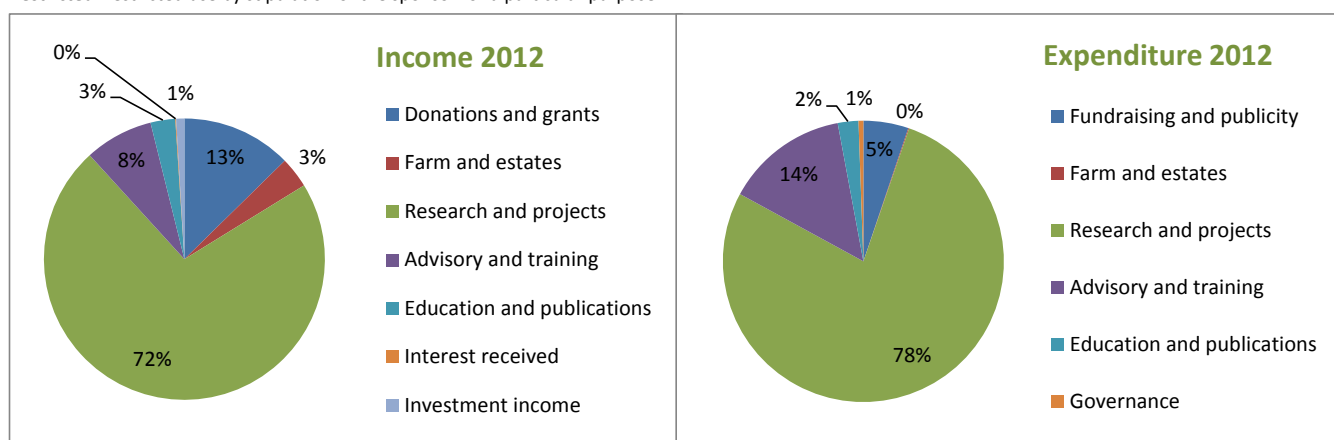
Values (£)	Funds	Unrestricted	Designated	Restricted	Total (2012)	Total (2011)
Incoming resources						
Donations and grants		117,339	-	8,114	125,453	128,108
Farm and estates		35,190	-	-	35,190	25,911
Research and projects		-	-	713,212	713,212	783,506
Advisory and training		28,113	-	50,062	78,175	143,323
Education and publications		-	-	28,135	28,135	27,152
Interest received		932	-	-	932	178
Investment income		9,383	-	-	9,383	11,020
Sundry		-	-	-	-	-
Total		190,957	-	799,523	990,480	1,119,198
Resources expended						
Fundraising and publicity		62,533	-	-	62,533	6,412
Farm and estates		1,226	-	-	1,226	2,622
Research and projects		179,251	4,200	752,759	936,210	977,344
Advisory and training		121,681	-	48,688	170,369	177,024
Education and publications		5,884	-	22,823	28,707	16,005
Governance		6,659	-	-	6,659	11,590
Total		377,234	4,200	824,270	1,205,704	1,190,997
Net incoming/outgoing resources						
Before transfers		(186,277)	(4,200)	(24,747)	(215,224)	(71,800)
Gross transfers between funds		(38,827)	-	38,827	-	-
Gain/loss on investment assets		18,395	-	-	18,395	(6,746)
Net movement in funds		(206,709)	(4,200)	14,080	(196,829)	(78,546)

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 2012

	2012	2011
Fixed assets	2,458,358	2,520,829
of which Land (historic cost)	750,000	750,000
Buildings (historic cost)	1,464,700	1,496,860
Investments (market value)	243,658	273,969
Current assets	51,103	202,916
of which Stocks	4,958	7,186
Debtors	44,776	190,820
Cash at bank/in hand	1,369	4,910
Creditors amounts due within 1 year	(370,540)	(387,994)
Net current liabilities	(319,437)	(185,078)
Total assets less current liabilities	2,138,922	2,335,751
Amounts falling due after one year	350,000	350,000
Net assets	1,788,922	1,985,751
of which Restricted	57,253	43,173
Designated	95,337	99,537



Project partners and outputs

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 Rural College (SRUC); University of Aberdeen; University of East Anglia; University of Gloucester (Countryside and Community Research Institute); University of Nottingham; University of Reading; Warwick University.

Industry UK

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.; Crisping 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 Arable; Organic Farmers & Growers Ltd; Organic Milk Suppliers Co-operative (OMSCo); 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 (Charity) Ltd; 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 Científicas (ES); Agence Française pour le Développement et la Promotion de l'Agriculture Biologique (Agence Bio, FR); Agrarmarkt Informations GmbH (AMI, DE); Agricultural Research Institute of the Hungarian Academy of Sciences (HU); Agrifood Research (MTT, FI); Agricultural Dairy Cooperative of Anogea (Proodos, GR); Agroscope Reckenholz-Tänikon Research Station (CH); Agrovegetal (ES); Andalusian Federation of Associations of Purebred Goat (Cabrandaluca, ES); Arcoiris (IT); Aristotelio Panepistimio Thessalonikis (GR); Associazione Italiana per l'Agricoltura Biologica (AIAB, IT); Benaki Phytopathological Institute (GR); Bio-Austria (AT); BIOCOOP Productos Biologicos (ES); Bioland Beratung GmbH (DE);

Biomarkt-Info Kai Kreuzer (DE); Centro di Sperimentazione Agraria e Forestale Laimburg Azienda (IT); College of the Atlantic (Maine, USA); Coordination Nationale des Organisations Paysannes du Mali (Mali); Czech University of Life Sciences, Prague (CZ); ECOZEPT (DE); Eidgenössisches Volkswirtschaftsdepartement (CH); Escola Superior Agraria de Coimbra (PT); European Consortium for Organic Plant Breeding (ECOPB, EU); European Union Joint Research Centre (JRC, ES); Ferrari Costruzioni Meccaniche SRL (IT); Fondazione Edmund Mach (IT); Friedrich Wenz GmbH (DE) Gautier Semences (FR); Getreidezüchtung Darzau (DE); Institut National de la Recherche Agronomique (INRA, FR); INRA Transfert (FR); Institut Technique de l'Agriculture Biologique (FR); Institute for European Environmental Policy (IEEP, BE); Institute for Ethical and Environmental Certification (ICEA, IT); Institute for Market Ecology Turkey (IMO, TR); Institute of Food and Research Economics (DK); Instituto agronomico do Parana (BR); Instituto de Agricultura Sostenible (ES); Instituto de Tecnologia Química e Biológica (PT); Institutul National de Cercetare-dezvoltare Pentru Biologie si Nutritie Animala (RO); Instituut voor Landbouw en Visserijonderzoek (ILVO, BE); Instytut Badwoczy (PL); Instytut Ochrony Roslin (PL); Instytut uprawy nawozenia i gleboznawstwa, Panstwowy (PL); International Centre for Agricultural Research in Dry Areas (ICARDA); International Centre for Research in Organic Food Systems (DK); International Committee for Animal Recording (ICAR, IT); International Federation of Organic Agriculture Movements EU Group (IFOAM EU, BE); INTERVAL GmbH (DE); Julius Kühn Institute (DE); Juvan Luomu Ltd (FI); Knowledge Centre for Agriculture (DK); Københavns Universitet (DK); Leibniz-Zentrum für Agrarlandwirtschaftsforschung e.V (ZALF, DE); Lacto Solomonescu (RO); Lithuanian Institute of Agrarian Economics (LI); Louis Bolk Instituut, Driebergen (NL); Marangon SRL (IT); Mediterranean Agronomic Institute, Bari (IAMB, IT); Mekelle University (Ethiopia); Mittetulundusuhing Okoloogiliste Tehnoloogiate Keskus (CEET, EE); Murphy-Bokern Konzepte (DE); Norwegian Institute for Agricultural and Environmental Research (BIOFORSK, NO); Oreade Breche (FR); P.H. Petersen Saatzzucht Lundsgaard GmbH & CO KG (DE); Pro-Bio Association of Ecological Farmers (CZ); RISØ National Laboratory for Sustainable Energy (DK); Saatzzucht Donau (AT); Scuola Superiore Sant'Anna, Pisa (IT); Stichting Dienst Landbouwkundig Onderzoek NL); Swedish University of Agricultural Sciences (SE); Swiss Research Institute of Organic Agriculture (FiBL, CH); Technical University of Munich (DE); Thiese Dairy Co (DK); Thünen Institute (DE); University of Aarhus (DK); University of Applied Sciences (DE); University of Barcelona (ES); University of Gent (BE); University of Helsinki (FI); University of Hohenheim (DE); University of Kassel (DE); University of Natural Resources and Applied Life Sciences, Vienna (BOKU, AT); University of Perugia (IT); University of Pisa (IT); Università Politecnica delle Marche (IT); University of Tuscia (IT); Videncentret for Landbrug (DAAS, DK); Wageningen University Research (NL); Wim Govaerts & Co CVBA (BE).

Outputs

Publications

Peer-reviewed papers are indicated with *

Four issues (107-110) 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.

- Baresel P, **Döring TF**, Finckh MR (2012) OSCAR – a new European project on cover crops. *12th Congress of the European Society for Agronomy*. Helsinki, Finland, 20-24 August 2012
- Brown RJ**, **Döring TF**, Storkey J, **Smith J**, Jones HE, Potts SG (2012) Legume-based plant mixtures for delivery of ecosystem services: pollinators. In: McCracken K (ed.) SAC-SEPA Biennial conference: *Valuing Ecosystems: Policy, Economic and Management Interactions*. Edinburgh 3-4 April 2012, pp156-162
- Crowley O**, **Döring TF**, **Measures M** (2012) Using minimum tillage to improve the efficiency of ecosystem service delivery on organic farms. In: McCracken K (ed.) SAC-SEPA Biennial conference: *Valuing Ecosystems: Policy, Economic and Management Interactions*. Edinburgh 3-4 April 2012, pp169-174
- Döring TF**, **Crowley O**, Jones H, Baddeley J, Storkey J (2012) Happy hay. *Organic Farming* 109:44-45
- Döring TF** (2012) A review of ongoing European research into reduced tillage in organic agriculture. 6th Organic Producers' Conference, 18-19 January 2012, Aston University Birmingham, UK
- Döring TF**, Baddeley J, Collins R, **Crowley O**, Cuttle S, **Howlett S**, Jones H, McCalman H, **Pearce H**, Roderick S, Storkey J, **Wolfe M** (2012) Productivity effects of increased plant diversity in fertility building leys depend on soil organic matter levels. *12th Congress of the European Society for Agronomy*. Helsinki, Finland, 20-24 August 2012
- ***Döring TF**, Bocci R, **Hitchings R**, **Howlett SA**, Lammerts van Bueren E, Pautasso M, Raaijmakers M, Rey F, Stubsgaard A, Weinhappel M, Wilbois K, **Winkler LR**, **Wolfe MS** (2012) A review of the framework of organic seed regulations in Europe. *Organic Agriculture*. doi:10.1007/s13165-012-0034-7
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Events organised

- Apple agroforestry workshop, Wakelyns Agroforestry (Dec-11)
- 6th ORC Organic Producers' Conference, Birmingham (Jan-12)
- Round Table for Organic Agriculture and Climate Change Meeting, ORC (Feb-12)
- The Future of Agroecology and IAASTD: practical, policy and research priorities roundtable, London (Mar-12)
- GHG Platform Stakeholder Workshop, Birmingham. (May-12)
- Health Concepts Workshop, Elm Farm (Jun-12)
- ORC Open Day, Wakelyns (Jun-12)
- Agriculture and Horticulture Development Board visit, ORC Elm Farm (Jul-12)
- Natural England workshop on intercropping, Wakelyns Agroforestry (Jul-12)
- UK statistics initiative of the Organic Data Network project, ORC Elm Farm (Jul-12)
- National Trust Training Event, Wakelyns Agroforestry (Sep-12)
- IFOAM UK/Eng. Organic Forum, ORC (Sep-12)
- IOTA Agroforestry Workshop, Whitehall Farm (Sep-12)
- Soil Association and ORC Organic Poultry Conference, Bristol (Oct-12)

Events contributed to

- ECOPB Organic plant breeding conference, Germany (Nov-11)
- IFOAM UK General Assembly, Bristol (Nov-11)
- IFOAM EU Group conference on Resource Efficiency, Brussels (Nov-11)
- IFOAM EU Group General Assembly, Brussels (Nov-11)
- European Commission Advisory Committee on Rural Development, Brussels (Nov-11)
- APPG Agroecology CAP Reform roundtable, House of Lords (Nov-11)
- Guardian Sustainable Business Quarterly Meeting (Nov-11)
- Portuguese Organic Action Plan conference, Lisbon (Nov-11)
- European Agroforestry Federation meeting (EURA), Paris (Dec-11)
- Oxford Real Farming Conference (Jan-12)
- Global Organic Market Access (GOMA) conference Nuremberg (Feb-12)
- Biofach, Nuremberg (Feb-12)
- EU Expert Group poultry sub-group meeting, Brussels (Feb-12)

- 6th IFOAM EU Organic Congress, DK (Apr-12)
- ECOPB General Assembly, Rome (Apr-12)
- The Transatlantic Partnership Food Connections conference, Maine, USA (Apr-12)
- SAC-SEPA Conference: Valuing Ecosystems - Policy, Economic and Management Interactions, Edinburgh (May-12)
- INRA workshop on socio-economic aspects of conversion, Avignon (May-12)
- 2012 Annual Meeting of the Farm Woodland Forum, Bangor (May-12)
- IFOAM EU 'Sweden Group' protected cropping, Strängnäs (May-12)
- Mediterranean Organic Agriculture Network (MOAN) annual meeting, Skopje (May-12)
- Cereals 2012. Boothby Graffoe, Lincs. (Jun-12)
- Earth Summit / Rio+20, Rio de Janeiro (Jun-12)
- National Organic Cereals Event, Dorset (Jul-12)
- Agri Innovation Workshop, IFOAM – EU, ARC 2020 and TP Organic, Brussels (Jul-12)
- Royal Welsh Show, Builth Wells (Jul-12)
- European Society of Agronomy Conference, Helsinki, Finland (Aug-12)
- 2nd IFOAM Congress on Animal Husbandry, Hamburg, Germany (Sep-12)
- IFOAM EU Group and EU Commission Organic Days, Cyprus (Sep-12)
- European Agroforestry Federation conference, Brussels (Oct-12)

Directorships, Memberships of Boards and Government Committees

- Döring, TF** Fellow, Royal Entomological Society
- Hitchings, R** Pool member, European Commission Expert Group for Technical Advice on Organic Production
- Hitchings, R** Secretary, Organic Growers' Alliance
- Lampkin, N** Permanent member, European Commission Expert Group for Technical Advice on Organic Production.
- Lampkin, N** Member, Defra/Natural England Agri-environment Stakeholders Group
- Lampkin, N** Director, Institute of Organic Training and Advice
- Lampkin, N** Member, Agricultural Industry Greenhouse Gas Action Plan Steering Group
- Lampkin, N** Director, Task 37/PROBIOGAS UK
- Padel, S** Member, Steering Group, Better Organic Business Links, Organic Centre Wales
- Padel, S** Member, Steering Committee of the EU Technology Platform 'TP Organics'
- Padel, S** Pool member, European Commission Expert Group for Technical Advice on Organic Production
- Pearce, B** Director and Member of Management Committee, GM Freeze
- Pearce, B** Pool Member, European Commission Expert Group for Technical Advice on Organic Production
- Pearce, B** Member IFOAM EU Poultry Expert Group
- Smith, J** Member, Farm Woodland Forum Executive Committee
- Smith, J** Member, European Agroforestry Federation Executive Committee
- Smith, J** Member, North Wessex Downs AONB Council of Partners
- 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
- 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

