THE ORGANIC RESEARCH CENTRE
ELM FARM

Bulletin

with technical updates from The Organic Advisory Service

No. 102 **October 2010**

Reg. Charity No: 281276
ISSN 1367-6970

Organic sector representation being decimated

Defra's Advisory Committee on Organic Standards seems set to be scrapped. Its Organic Action Plan group was starved into non-existence sometime ago. Within Defra the already poorly resourced Organic Farming Unit, which services the whole of the UK, is likely to face further cuts if it survives at all.

In Wales, the futures of the Organic Strategy Group and the Organic Action Plan are in doubt, whilst the future of Organic Centre Wales is uncertain as the Welsh Assembly Government cuts its core funding beyond the end of December.

The recession and financial cutbacks are the catalyst, but for some time opposition in the upper levels of the civil service to organic farming and its support schemes has been reasserting itself. In Defra ministerial support for organic farming waned following Michael Meacher's resignation. Some senior officials viewed the time and resources spent on organic farming as disproportionate and freed of ministerial interest were able to make cutbacks.

The current situation in Wales is different, but one factor resonates from Westminster across the Severn. Where a minister can't or won't actively support the investment of resources into organic farming, officials – who find it too challenging, don't understand it, don't want to deal with outsiders from the organic sector or due to background, training or just bloody mindedness – oppose it and begin to impose cuts.

There is no doubt that political support for the organic sector has diminished and consequently the recession induced cutbacks are going to be harsher than they might have once been. Reviving that support is crucial.

However this is not just a matter of writing to MPs or of individuals and organisations seeking meetings with ministers or business groupings launching initiatives. It needs coherent and united action.

Can the organic sector in the UK become coherent and united enough? It contains within it people and organisations who have goodwill for each other but cannot seem to harmonize that into consistent united actions. We need to change, to talk together, acknowledge partnership and mutuality and then maybe we can act together.

There are signs that this is happening and the UK group of the International Federation of Organic Agriculture Movements can facilitate this further. It can provide a meeting ground and participatory frame; existing members are beginning the process, others can readily join and UK organic movement might then be able to recreate its coherence, political voice and muscle.

Lawrence Woodward

Contents

Organic farming support and CAP reform

As we outlined in the last Bulletin (101) the debate on further reform of the Common Agricultural Policy is in full swing, with position papers coming from all directions, the Commission engaging in extensive public consultation and Commissioner Ciolos in speech overdrive mode. ORC director Nic Lampkin has had 15 years involvement in research on European organic farming policies, recently summarised in a special issue of the journal Food Policy (Stolze and Lampkin, 2009). In the article below he highlights some of the key issues that need to be considered.

While some have argued that the current CAP Reform debate provides an opportunity to end subsidies to farmers, it is unlikely that the reforms will be this radical – the experience of the 2000 and 2007 reforms is that radical-sounding reforms are negotiated away in the compromises needed to ensure agreement between the 27 member states. At best some modest reforms, with a probable reduction of the overall CAP budget and a further shift of resources from Pillar 1 (the mainstream commodity measures) to Pillar 2 (the agri-environmental and rural development measures), will be achieved.

The 2014-2020 CAP reform debate is taking place within the context of the recently agreed Europe 2020 strategy for 'smart, sustainable and inclusive' growth. Prepared in the wake of the economic crisis, the 'Brussels' strategy agreed by the European Council in June 2010, like its predecessor Lisbon and Gothenburg strategies, struggles to balance economic growth with environmental sustainability. In some senses this continues a trend, started in Lisbon, of reducing the emphasis on environmental issues, but also reflects recent financial crises and current public expenditure constraints.

The Commission's reform proposals are expected to be published in November this year. However, when launching the recent public consultation process, the Commission identified (EC, 2009) that policy intervention was needed to address volatile markets (following rapid price rises in 2007 and subsequent falls in 2008), the delivery of public goods and a sustainable rural environment.

This reflects a continued commitment to the original CAP objectives, but it also recognises the new challenges imposed by climate change and the need to better address the provision of public goods by agriculture. The web-based public consultation, which elicited a large number of responses, was inconclusive about the types of policies that should be implemented. Instead, it revealed a distinct division between those seeking a greater emphasis on food production and profitability and those looking for environmental gains.

Delivery of public goods required…

The issue of justifying payments to farmers (particularly the Single Farm Payment in Pillar 1) in terms of benefits to society as well as to the agricultural sector is now much higher up the policy agenda. The case for justifying policy support in terms of market failure – because there is no incentive in private markets to deliver public goods – is not new but there has been a clear shift of public and policy opinion against particular industry sectors being supported for their own sake. Focusing on farming's delivery of public goods is necessary to provide a clearer justification for support.

In a detailed report prepared for the Commission, Cooper et al. (2009) have set out the nature of public goods delivered by agriculture, the support measures used to achieve this and their recommendations for policy changes. They emphasise the delivery of environmental goods such as agricultural landscapes, farmland biodiversity, water quality, water availability, soil functionality, climate stability (greenhouse gas emissions and carbon storage), air quality, resilience to flooding and fire, as well as a diverse suite of more social public goods, including food security and quality, rural vitality and farm animal welfare and health.

Furthermore, the report argues that in order to deliver these public goods there is a need for clearer target setting and improved cost-effectiveness of measures. Notably however, the authors also support the case that the delivery of public goods can be achieved by encouraging specific farming systems that tend to be associated with their provision. In particular they specify extensive livestock and mixed systems, particularly in mountain or high nature value areas, the more traditional permanent crop systems as well as organic systems.

…but difficult.

A focus on public goods is undeniably attractive politically and has much merit. However, delivering them cost effectively through specific targets is difficult to realise in practice, particularly if actual outputs need to be measured and valued as a condition of payment.

Many of the public goods in question are diffuse in nature, or expensive to quantify, and do not lend themselves to direct measurement of impacts on individual holdings. Experience with agri-environment schemes has shown that an increased emphasis on targeted measures to deliver specific outcomes carries the risk of focusing on schemes for administrative benefits rather than their overall environmental potential. In some cases, emphasis may be placed on proxy indicators that are less expensive to monitor. This can work successfully, but there is a danger that attention will switch from, for example, the ecosystem that needs to be supported to deliver the environmental services, to the indicator itself, leading to a distortion of the originally intended outcomes.

Transaction costs, the hidden administrative costs not included in the published payment rates to farmers, are a significant part of the equation. If the measures undertaken, or the outputs to be monitored, are highly specific to individual farms, and particularly if project officer visits and customised

plans/contracts are involved, they can be very high and may in extreme cases exceed the payments to the producers and the value of the services being delivered. There is therefore a trade-off to be made between cost and accuracy in implementing schemes.

Cost effective organic farming

As Cooper et al. (2009) identify, an alternative approach to targeted measures involves supporting land use systems such as organic farming, where the production standards underpinning such systems have been developed to address a number of environmental, social and other sustainability goals simultaneously. There is now substantial evidence (Lampkin, 2010; Schader, 2010) that organic systems can deliver a broad range of environmental services, addressing biodiversity, pollution, soil and energy conservation and climate change issues, justifying their inclusion in any scheme aimed at delivering public goods.

With the increasing concern about availability of funds for agri-environment schemes comes an increasing emphasis on their cost-effectiveness. Some agricultural economists have argued that there should be at least as many instruments as there are policy objectives in order to provide the most economically-efficient solution. Using this argument, systems-based approaches (such as organic farming) to agri-environment schemes, pursuing multiple objectives, have been described as inefficient, because some objectives may be over-delivered and others under-delivered. This argument assumes that there are no conflicting goals and no or few transaction costs. In fact, conflicting goals and/or detrimental side-effects are a fact of life for many agri-environmental policy instruments. Even if policies are designed especially to deal with a single environmental problem, they may have substantial effects on other environmental concerns.

This approach may also pose challenges relating to the delivery of some specific public goods because of the range of farm types to which the production standards can be applied (from intensive horticulture to mountain pastures). Put simply, the organic system may deliver a particular benefit more easily in one place or farm type than in another.

Schader (2010) has analysed the issue in detail with respect to the cost effectiveness of organic farming as a tool to deliver agri-environmental goals in Switzerland. His analysis indicates that an organic systems-based approach alongside a mix of targeted options can be a very cost-effective means of delivering agri-environmental outcomes.

Making more of the potential benefits

However, such differences can be offset by an ongoing commitment within the scheme to research, knowledge and technology transfer. As organic farmers operate within the certified organic regulatory framework they are relatively accustomed to a monitored public delivery role. However the effective delivery of multiple outputs which are both a consequence of, and an extra to, the farming system can only be enhanced by research, development and knowledge transfer.

Arguably this should be part of all public benefit or agri-environment schemes. Education, encompassing training, advice, participatory research and other extension activities, is crucial to keep producers well-informed with respect to the impacts they are having and the potential for improvement. Education in a broad sense is essential to ensuring regulatory compliance as well as increasing the outputs that can be delivered for a given level of policy investment, and reducing the costs to the producer of delivering the outputs sought.

Balancing policy and market goals

Unlike many agri-environment schemes, certified organic production is also strongly market focused. This has potential advantages in encouraging producer interest in conversion, and in sustaining organic land management in the event that agri-environmental support for organic land management is too low or withdrawn completely.

However, there have always been concerns that support payments can encourage increases in supply ahead of increases in demand, distorting markets and reducing prices. Some have argued that the support for conversion should be limited to what the market will bear, but should we then forego the potential environmental benefits from more widespread organic land management? In some cases it has been argued that continued organic management should be supported only by the market (particularly in the UK, France and the Netherlands), but should a minority of consumers be expected to pay for environmental benefits that accrue to society as a whole?

Do organic food consumers even share the same goals as environmental policy-makers? If many organic producers do not have access to premium markets, would it not be better to separate organic land management for environmental gain from organic food marketing as an entrepreneurial activity by farmers – even if the transaction cost advantages of organic certification are then lost? For some policy-makers working in an environment which is heavily dominated by public sector approaches to public good delivery, balancing policy-led and market-led solutions can also be a significant challenge because they do not have ownership of, and therefore do not trust, the market-led solutions.

These tensions can be seen in the way in which organic farming is dealt with in different European agri-environment schemes. In some countries such as Sweden, organic farming has been encouraged as an agri-environmental policy in its own right, with a certification requirement and market link left to the individual operator to develop separately. In other countries, such as Portugal and to some extent Scotland, failure to market products as organic has been seen as a disqualification criterion, even though the environmental benefits from organic farming result from the land management, not the marketing activities.

Addressing this apparent conflict between market-led and policy-led approaches is partly an institutional issue. If the regulations at international or national level are drafted in a such a way as to focus attention on specific approaches in isolation (for example the split between Axis 1 and Axis 2 in the current EU Rural Development Regulation) and national/regional government departments are structured to deliver to specific axes (for example the traditional separation

Organic farming support and CAP reform continued

of 'food', 'agriculture' and 'environment'), then it is likely that the interaction between activities, and the synergy that could result from that, will be lost. Where it does make sense for this type of departmentalisation of activities for other reasons, then specific efforts need to be made to ensure cross-departmental communication. These initiatives can be supported by increased engagement with a broad range of stakeholders, including both industry and civil society.

Organic farming at the heart of CAP reform

The increased focus on delivery of public goods in the CAP reform debate is to be welcomed and land management system based approaches such as organic farming have an important role to play. They can make a significant contribution to several policy objectives, and can be a cost-effective option for agri-environmental/land management policy, while also taking advantage of market opportunities and consumer willingness to pay for relevant benefits. Of course, research into improving organic systems and training will enable producers to manage their systems better and to reach the full potential contribution of organic farming to policy goals. But even as it is, any sensible policy would give organic farming a bigger and mainstream role in a reformed CAP. The organic sector though has to work together to ensure that sense prevails.

References:

Cooper, T., Hart, K. and Baldock, D. (2009) The Provision of Public Goods Through Agriculture in the European Union, Report Prepared for DG Agriculture and Rural Development, Contract No 30-CE-0233091/00-28, Institute for European Environmental Policy: London.

EC (2009) Why do we need a Common Agricultural Policy? Discussion paper, DG Agriculture and Rural Development, European Commission, Brussels.

NAO (2010) Defra's organic agri-environment scheme. Report HC513 by the Comptroller and Auditor General, National Audit Office. The Stationery Office, London.

Lampkin, N. H. (2010) Organic farming myths and reality. World Agriculture, 1(2): 46-53.

Schader, C. (2010) Cost-effectiveness of organic farming for achieving environmental policy targets in Switzerland. PhD Thesis. Forschungsinstitut für biologischen Landbau (FIBL), Frick, CH.

Stolze, M. & Lampkin, N. (2009) Policy for organic farming: rationale and concepts. In: Stolze, M. & Lampkin, N. (eds.) Development of Organic Farming Policy in Europe. Special Section. Food Policy 34(3):237-244.

A full version of this article will be published soon as an ORC position paper at: www.organicresearchcentre.com/?go=Policy and debates&page=CAP reform

Organic achievements under threat in Wales?

As Organic Centre Wales prepares to hold its annual Welsh Organic Producers' Conference on 21st October 2010 against the background of an increasingly gloomy policy support and market environment, we ask: could the achievements of the last ten years in Wales be reversed?

Organic producers have already been grappling with the effects of high conventional lamb prices leading to the virtual disappearance of organic premiums (see page 7), while this year should have seen many of the producers who started converting in 2007/8 achieving organic status, potentially leading to a 50% increase in organic lamb supplies. However, it seems that many producers have either been selling stock as conventional, or have extended their conversion periods, so that supply shortages next spring could still be a possibility and the problem of significant increases in supply has been effectively postponed to 2011.

Unfortunately, the challenges of recovering from the impact of the recession on demand in combination with the increases in supply have coincided with the introduction of Glastir, the Welsh Assembly Government's all-Wales land management scheme. The previous agri-environment schemes (including Tir Gofal, Tir Mynydd, Tir Cynnal and the Organic Farming Scheme) have all been merged into this single scheme, with a maximum payment of £28 per hectare (plus a 20% LFA supplement).

For organic producers, the majority of whom were also benefiting from the Tir Gofal (HLS equivalent) and Tir Mynydd (hill farming) schemes, the reduction in income they are facing is substantial; even though they qualify for a 50% points allowance to enter Glastir. For some, access to the higher level targeted measures might provide an opportunity to continue with the significant agri-environmental engagement they had previously been undertaking, but there is a high level of uncertainty about whether and under what conditions they will qualify. Some are even uncertain as to whether they will qualify for the basic scheme, because of the extent of activities previously undertaken.

Meanwhile, the future of Organic Centre Wales, the Organic Strategy Group and the Organic Action Plan are also in doubt as WAG carries out a review of its support at all levels. OCW has only been guaranteed core-funding until the end of December and some of its other contracts are due to end in 2011.

Representatives of the organic sector across Wales have been working to register their concerns about these recent developments. With Welsh Assembly elections due in May 2011, could organic farming policy become a significant issue for AMs?

“There is nothing like an Oat”

That’s not the title of a new version of the musical “South Pacific” but it could be the anthem of an ambitious new R&D project called “Quoats”. “Little disease, few weeds and impressive yields”, ORC crop researchers, Helen Pearce and Thomas Döring report on first year trials in pursuit of sustainable oat production.

It’s well known that oats are generally a good fit in organic rotations and the “Quoats” project – Harnessing new technologies for sustainable oat production and utilisation – aims to make them even better. This five year (2009 – 2014) research project, led by IBERS, Aberystwyth University, brings together a wide range of organisations in the supply chain, from breeders to end-users, to improve the quality and performance of oats.

As part of the project, ORC is carrying out field trials to assess the suitability of new oat lines for organic management systems, with particular emphasis on nutrient use efficiency. Eight varieties are being trialled at Wakelyns Agroforestry, Suffolk, including some naked oats, i.e. hull-less oats. These are particularly valuable for feed due to their high oil content and a beneficial amino acid profile. Similar trials are being run under non-organic management systems by ADAS in Nottinghamshire.

The trial is subject to two fertility treatments: untreated and treated with organic chicken manure pellets. The purpose of this added fertility is to investigate how efficient the new varieties are at taking up nutrients from the soil, but it will also help in testing lodging resistance; adding fertility tends to increase lodging, thus helping to distinguish between varieties with high resistance.

This year, the Wakelyns trial has looked good throughout the season, but suffered slightly from the drought, as evidenced by shorter straw than usual. There was very little disease or weed pressure, and yields were impressive. The highest yielding husked variety was Mascani at 9.7t/ha. Of the naked varieties, a new line being bred by IBERS gave the highest yield at 6.2t/ha. Wet weather at harvest resulted in some varieties lodging, in particular Mascani. The oats will be analysed for their protein and oil content, as well as their physical quality, and the results from these analyses will be available soon.

The pivotal part of Quoats is a breeding programme. Using a combination of conventional phenotypic selection and modern molecular marker technology, the breeders at IBERS hope to develop varieties that maximise the value of oats as a nutritious cereal for humans and livestock. With human consumption in mind, the emphasis will be on improving the beta-glucan content, a compound that can help reduce cholesterol levels. Further work will be directed at physical grain quality, such as kernel content.

Improving the quality of oats as a livestock feed is also a goal. Initial results from in vitro studies suggest that oats might reduce methane emissions from the rumen and results are now being validated in vivo. One focus of the project is to determine the effect of different oat lines on methane emissions.

We already know that oats are an environmentally benign crop, requiring fewer inputs than other cereals such as wheat, and can produce a good crop even on soils of relatively low nitrogen status. Quoats will help to make oats an increasingly attractive part of organic rotations and conventional rotations, thereby making the environmental and health benefits of this crop more widely available.

The Quoats project is funded by AHDB and industry partners and is jointly sponsored by BBSRC, by Defra through the Sustainable Arable LINK Programme, by European Regional Development Funding through the Welsh Assembly Government’s Academic Expertise for Business (A4B) Programme and through the Scottish Government Contract Research fund. Refer to the project website **www.quoats.org** for further details.

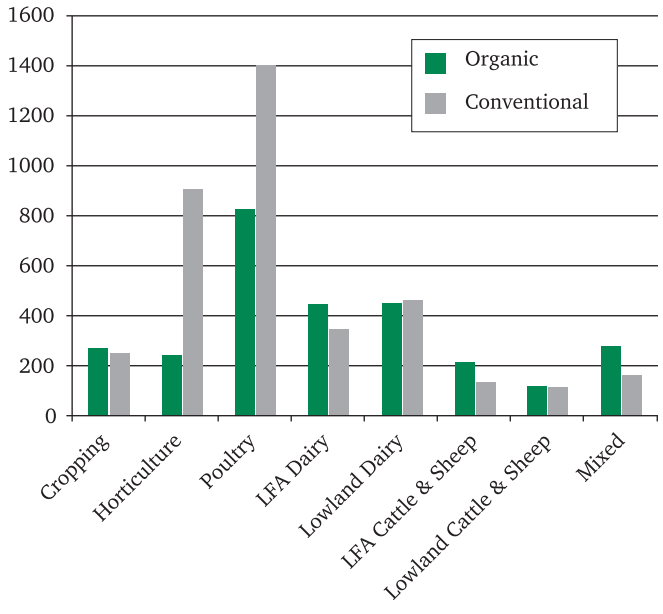
Oat trials ready to harvest

Organic farm incomes resilient in recession

Nic Lampkin (Organic Research Centre) and **Simon Moakes** (Aberystwyth University) **discuss the latest results (for 2008/9) from the annual Defra-funded monitoring of organic farm incomes in England and Wales. Most farm types, apart from horticulture, again achieved similar or slightly better incomes than comparable conventional farms, despite the recession. However, the improved prices obtained by some conventional farmers, particularly for beef and sheep, were not reflected on organic farms, where incomes were only slightly higher, or in some cases slightly lower, than the previous year.**

The **full sample** analysis permits comparisons between organic and conventional farms in 2008/09 (Figure 1). For most farm types, Net Farm Incomes (NFI) on organic farms remained at or above the level of conventional farms. Organic LFA livestock and mixed farms were considerably more profitable than their conventional comparisons. However, the organic horticulture and poultry farm types performed less well than conventional, mainly as a result of the specialisation/intensity of the comparable conventional systems – small organic farm sample size may also have affected the results.

Figure 1: Organic and conventional Net Farm Income (£/ha, full sample, 2008/09)



The identical sample analysis compares the performance of organic and comparable conventional farms in each of the two years 2007/08 and 2008/09. Figure 2 highlights that for most farm types, organic NFIs were similar to, or slightly higher than, the previous year, but there were some large gains for comparable conventional farms. Both organic and conventional sectors saw input costs rise in 2008/09, whilst within the conventional sector livestock farms showed considerable improvement in profitability, reflecting gains in conventional livestock and milk prices during the year.

Within the organic sector, horticulture, lowland cattle and sheep, mixed and LFA dairy farms all showed an improvement in NFI, whilst organic cropping and LFA cattle and sheep NFI declined marginally.

Figure 2: Percentage change in Net Farm Income/ha (Identical sample, 2007/08 and 2008/09)

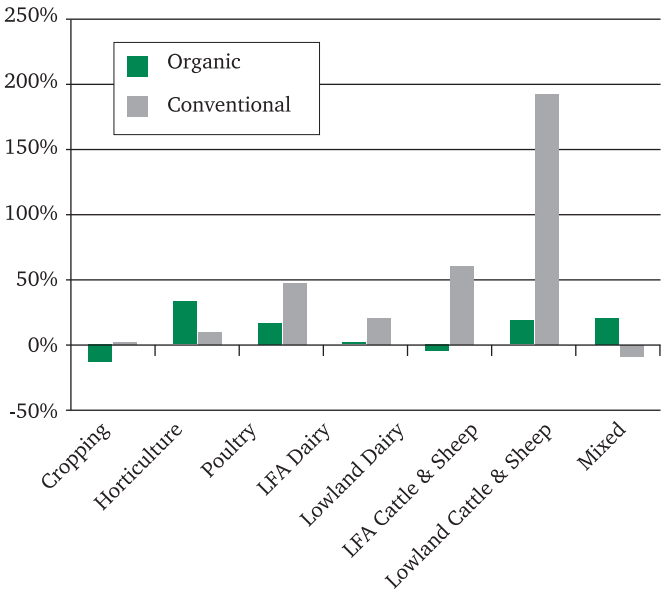


Table 1 shows NFI per farm and per hectare for full and identical samples in 2007/08 and 2008/09. It highlights that the main organic farm types studied over the two year period covered by this report remain financially competitive with comparable conventional businesses; their income not diverging significantly from that of conventional farms. The only exceptions appear to be organic poultry and horticulture that are outperformed by their conventional counterparts in part due to the intensity and reliance on external inputs of the conventional holdings, but the small sample sizes mean these results should be treated with caution.

The full report contains a detailed breakdown of whole farm outputs and costs as well as gross and net margins for different enterprises and per kg costs of production data. Figure 3 provides an example for milk, indicating that the premium needed to maintain comparable returns has widened from 5-6ppl in previous years to 8-9ppl in 2008/9, primarily due to high concentrate costs.

Defra funds the collection of organic farm income data in England and Wales as part of the Farm Business Survey. In 2008/9, data for 180 businesses with more than 70% fully organic certified land were analysed. 767 comparable conventional farms were identified using a clustering procedure to find a group of conventional farms matching each individual organic farm. The full report, and the report for the previous year, can be found at: http://randd.defra.gov.uk/Document.aspx?Document=OF0373_8918_FRP.pdf

Table 1: Summary of Net Farm Incomes (£/farm and £/ha) by farm type, 2007/08 and 2008/09

	Identical sample (£/farm)		Full sample (£/farm)		Identical sample (£/ha)		Full sample (£/ha)	
	2007/08	2008/09	2007/08	2008/09	2007/08	2008/09	2007/08	2008/09
Cropping								
Organic	44187	38806	47183	61476	206	179	241	270
Comparable conventional	44511	43591	35675	51974	223	223	199	251
Horticulture								
Organic	-3837	-2551	50625	4948	-249	-165	2662	244
Comparable conventional	18387	19780	41336	17436	1207	1327	2261	905
Poultry								
Organic	-	-	20534	39920	-	-	607	829
Comparable conventional	-	-	33742	56599	-	-	1293	1398
LFA diary								
Organic	47333	55628	33129	41577	413	485	380	446
Comparable convential	26251	38690	18675	30933	249	367	231	351
Lowland dairy								
Organic	50109	51444	63955	57553	405	413	510	459
Comparable conventional	41191	50617	45739	53228	384	463	401	459
LFA cattle and sheep								
Organic	33194	31663	33727	30780	230	219	238	215
Comparable conventional	11357	18184	11730	17158	89	143	88	136
Lowland cattle and sheep								
Organic	9799	11569	12307	13342	99	118	115	118
Comparable conventional	2409	7024	3220	11715	26	77	34	115
Mixed								
Organic	48444	59280	41649	48419	236	285	265	273
Comparable conventional	27761	26042	19563	24822	151	139	132	165

Figure 3: Organic and conventional dairy costs of production (ppl, identical sample, 2007/08 and 2008/09)

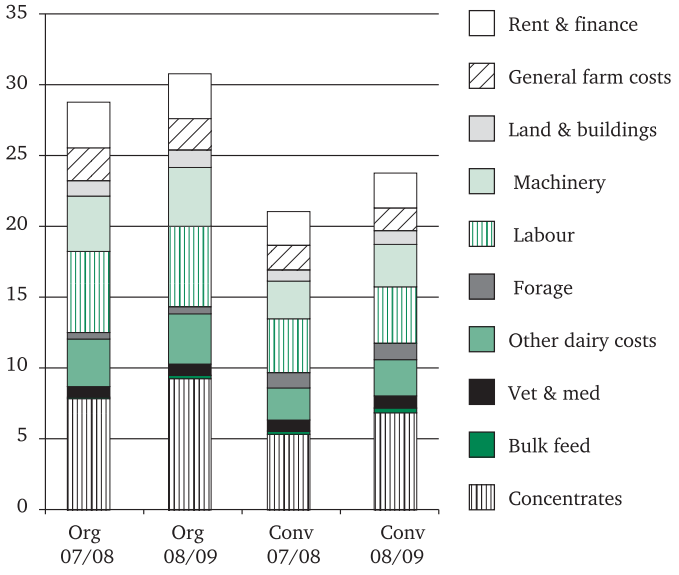
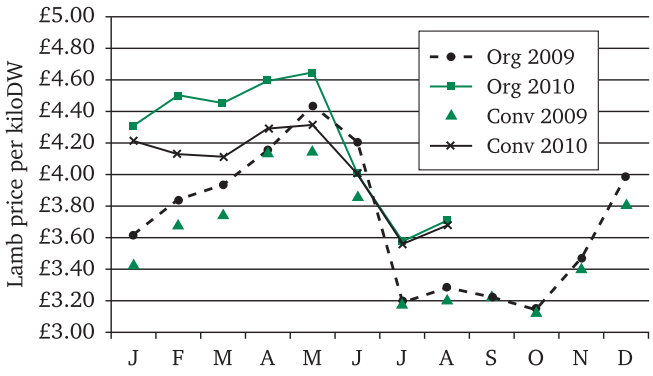


Figure 4: Organic and conventional lamb prices (p/kg DW, 2009 and 2010)



Organic data from Graig Producers, conventional prices simple average of HCC published "Average Weekly GB Deadweight Price – Lambs SQQ"

With the recession, the organic market has become more challenging, and for some producers, particularly beef cattle and sheep, premiums are now very low or non-existent. Demand pressures, increases in supply and high conventional prices have all contributed to the reduced premiums, but in the case of lamb particularly high conventional prices have resulted in organic producers getting higher prices than they were organically 2-3 years ago, even though the premiums have virtually disappeared (Figure 4).

It may therefore be that, despite the market pressures, incomes will have held up for some farm types in 2009/10. However, other sectors, in particular horticulture, have been experiencing real difficulties in the last 12 months, with retail sales for vegetables down as much as 30%. It is expected that these difficulties will be reflected in the 2009/10 results when they are published in spring 2011.

The Organic Research Centre publishes jointly with Aberystwyth University the Organic Farm Management Handbook with further information on organic costings. The 2009 edition is still available at a special reduced price (see advert). The new 2011 edition is in preparation and scheduled for publication in spring 2011.

Environmental benchmarking and sustainability assessment for organic agriculture

As the argument that agricultural support payments should be based on the delivery of environmental and public goods gains strength, the importance of assessing the full impact of agriculture on its environment has been stressed. Consequently, in recent years a number of tools and assessment methodologies have been developed. ORC researcher Laurence Smith and Lawrence Woodward explain some of the pitfalls and how we have been attempting to avoid them.

Farms are complex and affect their environment in many differing ways – agriculturally, environmentally and socially. Yet many current approaches to improving sustainability on farms are lacking in that they do not take full account of the range of interactions that are possible within farming systems. For example, the recommendation to increase straw use to reduce emissions on livestock farms may result in a great increase in straw transport from east to west, which would increase transport fuel use as well as the energy cost of baling straw that might otherwise be chopped and incorporated.

Such potential conflicts or trade-offs mean that in order to properly evaluate a farm's full impact a range of factors covering both local and global effects need to be taken into account. Ideally such an evaluation would be 'large enough to avoid creating new problems, yet small enough to maintain feasibility' (Van der Werf and Petit, 2002). This is easier to aspire to than to achieve.

EASIer written about than done

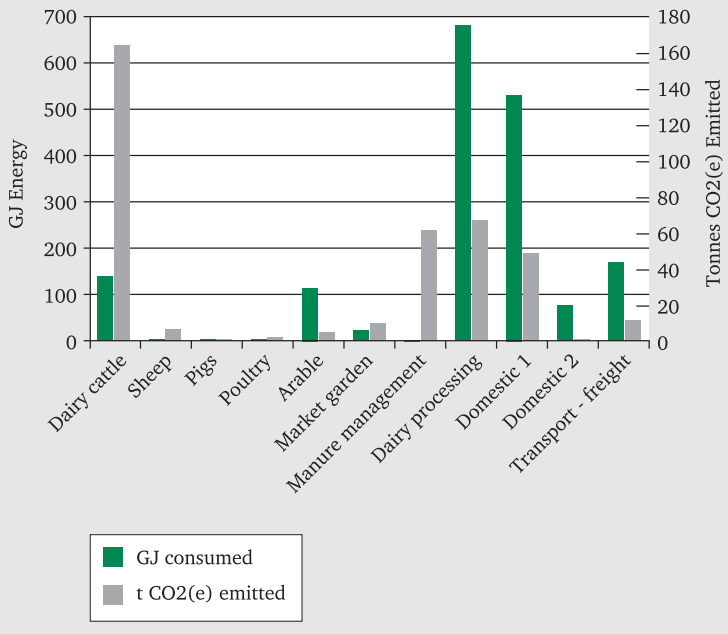
The Organic Research Centre has been involved in this work since 2005; developing tools and methodologies that assess and compare the performance of organic farming systems against environmental, economic and social criteria.

Inspired by work on the assessment of the achievement of organic principles that OAS advisor Mark Measures had undertaken with his Organic Systems Development Group, our research programme began with a Defra project on Quality and Environmental Benchmarking for organic agriculture (see box). The Energy, Emissions, Ecology and Agricultural Systems Integration Project (EASI) built on this work through the development of a farm assessment tool to compare farms' performance in terms of resource use efficiency and greenhouse gases (See box).

We have found a number of challenges in carrying out farm assessments, such as a lack of records and detailed empirical data on which to base calculations. There have been conflicts between broad elements, for example livestock are usually the major source of greenhouse gas emissions on a mixed farm, but fulfil a necessary role in terms of land management. The lack of adequate comparative data has also been problematic; this has highlighted an urgent need to develop well-documented reference material for organic farming systems.

Not surprisingly, we have found that assessments of this nature can go beyond the comfort zone of the farmer (e.g. comparing

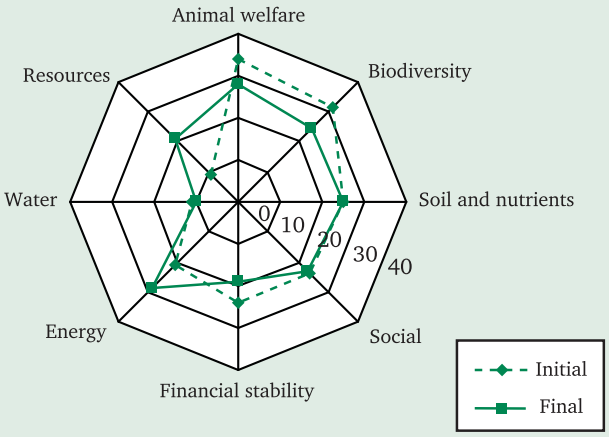
EASI Balancing farm energy, emissions, conservation and production



There are trade-offs in all systems; balancing them successfully prevents complexity turning into complication. Action to improve one factor can have a detrimental effect on another or on the whole system. The EASI tool (Energy, Emissions, Ecology and Agricultural Systems Integration) seeks to assess the whole farm and allow the farmer to compare the relative efficiency of enterprises and introduce measures that will improve the overall balance of sustainability on the farm.

Amongst the factors included is an assessment of energy consumed and the emissions given off by each enterprise. There is also a clear a trade off between the level of detail that can be achieved and the ability to consider a range of sustainability objectives; the farmers' and assessors' time is limited and the detail required for an accurate picture to be presented cannot always be achieved. Despite these difficulties, the farmers we have engaged with have found the process a useful one in terms of highlighting areas for improvement and potential cost savings (e.g. energy saving options).

Environmental benchmarking for organic agriculture



This project aimed to develop a 'quality and environmental benchmarking' tool for organic farmers to provide a means of identifying areas of lower environmental performance which could be improved. The approach taken was to identify the public goods that organic farming delivers, through a desk study and consultation with experts. Benchmarks were then created and incorporated into a tool which was piloted on one group of farmers.

Cobweb diagrams like the one displayed here were used to rank the farmers' interest in aspects of organic farming before and after the assessment. The greatest change in ranking of interest before and after the benchmarking activity was an increased level of interest in energy and resource use.

performance in terms of animal welfare) and that because the farmer is the client, and pays the advisor, the pushing of boundaries may not always happen. Farmers may also be reluctant to spend time or money on an assessment, which tends to focus on promoting longer term benefits rather than short term gains.

We have learnt that two things are crucial; firstly, finding the balance between the range of factors being assessed, the level of detail required and the time available from the farmer and the assessor/advisor. Secondly, it is important to find the best way to engage farmers in the process and help them implement any findings.

Encouraging the uptake of "best practice"

There are ideas around that might help make these tools more accessible to the farmer and encourage more effective uptake of identified "best practice".

Aggregation of factors may provide more accurate assessments and Lampkin et al., (2006) refer to the ELECTRE method that has been found to be a useful tool in multiple criteria decision aiding. Such techniques of assessment allow the performance of an entire holding or specific components to be assessed against a defined benchmark and presented in a 'report card' format.

Where relationships between parameters are not directly measurable, a cross-impacts matrix could be used to display interactions and the impact of changes on overall sustainability. Visual approaches, such as cobweb diagrams can be used to help convey this.

In terms of increasing uptake by farmers, it has been suggested that introducing a financial incentive could encourage participation by farmers (Halberg et al., 2005). Increased uptake may also be possible if farmers were able to benefit by demonstrating better than average environmental performance. For example, farmers with documented high efficiency in nutrient use could be allowed to have more animals than any given general limit in stocking rate (Goodlas et al., 2001).

The Organic Research Centre is continuing to address these issues, both to increase the accuracy and validity of the datasets that are used and to improve the methods through which the data are applied. This will be an iterative process that will take time and involve further engagement with key stakeholders.

To this end, we are working on a Defra-funded project led by Warwick HRI to develop a methodology for assessing the sustainability of a range of farming systems. In November, we are starting a new Defra-funded project to get better data on greenhouse gas emissions. Of more direct relevance to producers, we are also working on a Natural England project, linked to the Organic Conversion Information Service, to assess the 'Public Goods' that result from organic farming – an issue highly relevant to the current CAP Reform debate. The new tool will be tested on 40 farms this autumn and the results presented to the ORC Organic Producer Conference in January.

References:

Goodlass, G., Halberg, N., Verschuur, G. 2001. Study on Input/Output Accounting Systems on EU agricultural holdings. Utrecht: Centre for Agriculture and Environment.

Halberg, N., Van der Werf, H.M., Basset-Mens, C., Dalgaard, R., de Boer, I.J.M. 2005. Environmental assessment tools for the evaluation and improvement of European livestock production systems. Livestock Production Science. 96: 33-50.

Lampkin, N., Fowler, S.M., Jackson, A., Jeffreys, I., Lobley, M., Measures, M., Padel, S., Reed, M., , S., Woodward, L. 2006. Sustainability assessment for organic farming – integrating financial, environmental, social and animal welfare benchmarking. Aspects of Applied Biology, What will organic farming deliver?. 79: 9-13. Warwick: Association of Applied Biologists.

Van der Werf, H.M., Petit, J. 2002. Evaluation of the environmental impact of agriculture at the farm level: a comparison and analysis of 12 indicator-based methods. Agriculture Ecosystems and Environment. 93: 131-145.

Northern Ireland 18; rest of the UK 11

This is not a rugby score. It's the different levels of support for biogas plants in Northern Ireland compared to the rest of the UK. ORC Sustainability Researcher Laurence Smith explains.

The Northern Ireland Department of Enterprise and Trade and Investment have significantly increased their rates of support for anaerobic digestion (AD) to 18p per kWh of electricity generated for digesters up to 500 KW and 13.5p/kWh for larger ones.

These rates will be implemented, subject to EU State Aids approval, from April 2011 and compare well with rates of support being offered in other European countries (see table below). This development pushes Northern Ireland to the middle of the EU biogas support table but leaves the rest of the UK bogged down in the relegation zone.

The poor rates of support currently offered in England, Scotland and Wales, through the Feed In Tariff scheme (see Bulletin 99), mean that the development of AD is likely to continue to be slow, compared to other countries such as Germany, which now has over 4500 biogas plants.

A further massive boost to biogas in Germany and many other European countries is that they do not charge for the costs of upgrading the local electricity network to connect renewable generation. This can be a significant part of the set-up costs in the UK.

Nevertheless, the increased rates of support being implemented by the Northern Ireland authorities are a welcome step in the right direction, and one that we hope will be followed by the Department for Energy and Climate Change (DECC) in the near future.

Fiscal support for biogas in Europe, in pence per kWh:

Country/size of system	100 kW	500 kW	1000 kW	Guaranteed years
Austria	13.88	11.46	10.15	10
Germany	9.56 – 25.14	7.75 – 20.87	6.97 – 14.35	20
Italy	18.04 – 22.96	18.04 – 22.96	18.04 – 22.96	15
Spain	8.81 – 13.02	8.81 – 13.02	8.81 – 13.02	15
England, Scotland, Wales	11.00	11.00	9.00	20
Northern Ireland	18.00	18.00	13.50	20

Adapted from: A Biogas Road Map for Europe, European Biomass Association Accessed online at: http://www.aebiom.org.

News from ORC

The Organic Research Centre is continuing to progress during its 30th anniversary year celebrating successful bids for significant *new research contracts* covering greenhouse gas data-mining (Defra-funded, starting November) and organic milk production (EU-funded, starting in 2011). In both cases, ORC is part of larger consortium of UK and international partners.

ORC has also been developing a ***public good assessment tool*** for Natural England, linked to the Defra-funded Organic Conversion Information Service. This builds on previous EASI and environmental benchmarking projects and will be tested on 40 farms this autumn. Initial responses to this tool, which has adopted a 'rapid appraisal' and farmer-friendly approach with respect to data requirements, have been very enthusiastic.

In August, we held the second of the ***Transatlantic Partnership summer courses*** (involving the College of the Atlantic, Maine, and University of Kassel) on the theme of 'Our Daily Bread' – looking at wheat from its history through plant breeding and production to milling, bread making and product quality. The course was attended by 11 students from the US, 2 from Germany and 2 from the UK.

Also in August, we finally achieved major changes to ***our website*** as part of plans to significantly upgrade the quantity and quality of information available. While this is still a work in progress, it is worth taking a look to see what's new at www.organicresearchcentre.com

This year has seen a very large increase in the number of ***visiting students and interns*** we have been able to support, using accommodation now available at Elm Farm. We have hosted students/interns from the US, Germany, France, Italy and the UK (Royal Agricultural College) and we are increasing the number of jointly supervised student and postgraduate projects with the University of Reading.

As a pledgor and founder-member of the OrganicUK EU-funded promotion campaign, we were very pleased that the campaign managed to overcome the final hurdles and was approved for funding in the summer. We are looking forward to engaging in the campaign and will be joining the first pledgors meeting scheduled for November 25th.

Preparations for the ***ORC organic producer conference*** on 17-18th January 2011 near Cirencester are progressing rapidly and an outline programme is now available on the ORC website – if you think you might be able to make a contribution to any of the sessions listed, it may still be possible to do so – please e-mail Nic Lampkin on nic.l@organicresearchcentre.com. Registration forms will be available very shortly – there are very significant discounts for early registration in a bid to keep costs to producers down and we are actively seeking support from various sources to reduce prices further. Participants willing to share rooms will also be able to qualify for reduced rates.

As part of the European Action Plan for Organic Food and Farming published in 2004, the European Commission undertook to set up an ***Expert Group*** to advise it on the organic regulation and organic farming policy issues. Recruitment to this group was finally announced in 2010, and we are very pleased that four ORC staff have been appointed to the group: Nic Lampkin as a permanent member and Susanne Padel, Bruce Pearce and Roger Hitchings as pool members.

Roger Hitchings, known to many through his role co-ordinating the Organic Advisory Service and the Organic Conversion Information Service in England, as well as his horticultural advisory roles, has been very seriously ill with pneumonia since early September. Thankfully, he is now out of intensive care and beginning the long process of recovery. We have endeavoured to ensure all his work-related activities have been covered by other colleagues, but if you are aware of any outstanding issues, please get in contact with Gillian Woodward at ORC.

New technical guide on organic poultry production for meat

ORC staff have contributed to a new guide – "Organic Poultry Production for Meat". It is part of the Organic Farming Technical Guide Series published by Organic Centre Wales. The guide is aimed mainly at those thinking about growing organic poultry for meat for the first time.

Based on a combination of practical experience and the latest research, it covers all the key points of organic poultry meat production and gives readers a good grasp of what is involved including housing and bedding, range management and enhancement, stocking rates, feed and feeding systems, and disease and health management.

As well as information about organic standards the guide highlights the most significant characteristics of an organic poultry system, the advisability of a wider integrated organic system and the enhancement of range.

A section on breeds discusses dual purpose (eggs too) birds and different approaches to brooding are covered in detail including different size brooding systems and technical information (housing, heating, ventilation, feed etc) on how to do it successfully.

The section on slaughter and processing covers organic standards, regulations and technical information about setting up processing operations. Economics of organic poultry production is covered, providing information that any would-be organic poultry producer could use to make estimates of the economic viability of a proposed system.

Information on resources and a contact list for further information and advice is provided. The guide can be downloaded from **www.organiccentrewales.org.uk /uploads/poultry_guide_english.pdf**

Organic Research Centre, Elm Farm

2011 Organic Producer Conference

30th Anniversary Event: 17-18 January 2011

Four Pillars Hotel. Cotswold Water Park, Cirencester

Supporting the best practice application of organic and agro-ecological principles.

Major themes: Arable, Horticulture, Livestock, Agro-forestry and Wider benefits

Visit www.organicresearchcentre.com for programme and registration details.

Register now for your early bird discount.

30TH ANNIVERSARY APPEAL

We urgently need YOUR financial support to continue our work as the UK's leading independent research centre for organic/ agro-ecological approaches to sustainable food production.

Our work includes practical, participatory research for and with producers, advice, education for students and schools, policy engagement with governments and much much more.

Much of our work is funded by government research contracts, but without your support, we cannot maintain our role as an independent voice for food sustainability based on organic principles and best practice.

If you would like to donate, become a friend with a regular donation or include us in your will, please phone 01488 658298 for details or download our 30th Anniversary Appeal details from www.organicresearchcentre.com

The Organic Research Centre – Elm Farm • Hamstead Marshall • Nr Newbury • Berkshire • RG20 0HR • United Kingdom
Tel: +44 (0)1488 658298 Fax: +44 (0)1488 658503 Email: elmfarm@organicresearchcentre.com
Web: www.organicresearchcentre.com • www.organicinform.org | Registered Charity Number: 281276 Company: 1513190