General enquiries on this form should be made to:
Defra, Science Directorate, Management Support and Finance Team,
Telephone No. 020 7238 1612
E-mail: research.competitions@defra.gsi.gov.uk

# SID 5 Research Project Final Report

- **Note**
  In line with the Freedom of Information Act 2000, Defra aims to place the results of its completed research projects in the public domain wherever possible. The SID 5 (Research Project Final Report) is designed to capture the information on the results and outputs of Defra-funded research in a format that is easily publishable through the Defra website. A SID 5 must be completed for all projects.

  A SID 5A form must be completed where a project is paid on a monthly basis or against quarterly invoices. No SID 5A is required where payments are made at milestone points. When a SID 5A is required, no SID 5 form will be accepted without the accompanying SID 5A.

- This form is in Word format and the boxes may be expanded or reduced, as appropriate.

- **ACCESS TO INFORMATION**
  The information collected on this form will be stored electronically and may be sent to any part of Defra, or to individual researchers or organisations outside Defra for the purposes of reviewing the project. Defra may also disclose the information to any outside organisation acting as an agent authorised by Defra to process final research reports on its behalf. Defra intends to publish this form on its website, unless there are strong reasons not to, which fully comply with exemptions under the Environmental Information Regulations or the Freedom of Information Act 2000.

  Defra may be required to release information, including personal data and commercial information, on request under the Environmental Information Regulations or the Freedom of Information Act 2000. However, Defra will not permit any unwarranted breach of confidentiality or act in contravention of its obligations under the Data Protection Act 1998. Defra or its appointed agents may use the name, address or other details on your form to contact you in connection with occasional customer research aimed at improving the processes through which Defra works with its contractors.

## Project identification

1. Defra Project code: OF0350

2. Project title:
   What issues and aspirations do stakeholders feel should be addressed by publicly funded research into organic farming in the UK.

3. Contractor organisation(s):
   EFRC
   SAC
   OCW
   DARDNI Greenmount Campus
   SOPA

4. Total Defra project costs: £ 67,410

5. Project: start date ..... 01 February 2005

   end date ..... 31 July 2005

6. It is Defra's intention to publish this form.
Please confirm your agreement to do so.....**YES** ☒ **NO** ☐

(a) When preparing SID 5s contractors should bear in mind that Defra intends that they be made public. They should be written in a clear and concise manner and represent a full account of the research project which someone not closely associated with the project can follow.

Defra recognises that in a small minority of cases there may be information, such as intellectual property or commercially confidential data, used in or generated by the research project, which should not be disclosed. In these cases, such information should be detailed in a separate annex (not to be published) so that the SID 5 can be placed in the public domain. Where it is impossible to complete the Final Report without including references to any sensitive or confidential data, the information should be included and section (b) completed. NB: only in exceptional circumstances will Defra expect contractors to give a "No" answer.

In all cases, reasons for withholding information must be fully in line with exemptions under the Environmental Information Regulations or the Freedom of Information Act 2000.

(b) If you have answered NO, please explain why the Final report should not be released into public domain

## Executive Summary

7. The executive summary must not exceed 2 sides in total of A4 and should be understandable to the intelligent non-scientist. It should cover the main objectives, methods and findings of the research, together with any other significant events and options for new work.


Defra required expert scientific support for the R&D sub-committee of the Advisory Committee on Organic Standards (ACOS). Therefore the main objective of this project was to facilitate the ACOS R&D sub-committee in its function to provide advice to Defra on priorities for research needed to inform relevant UK policy making and the development of the organic sector in line with the *organic action plans for England, Wales and Scotland* and *Organic Farming in Northern Ireland: A Development Strategy*. The project will seek to identify and analyse issues and aspirations that stakeholders feel should be addressed by publicly funded organic farming research in the UK.

Stakeholders included the complete continuum of the organic sector from farmers, producers and land managers, to processors, marketers, retailers as well as consumers and the scientific community.

This project has built on past work carried out in England, Scotland and Wales. It has updated the information on past research projects and funding undertaken in the Defra funded project OF0338. The database has also been expanded to include information on processing, marketing and food quality and safety of organic products. The study has identified and collated past research priorities; produced a directory of past and current projects and evaluated these projects against the collated priorities.

The project was also novel in that, for the first time in the UK, the process of consultation and stakeholder involvement has been studied by social scientists and recommendations have been made on how the process could be improved for future exercises.

**Objectives.**

To inform the ACOS R&D sub-committee in its work of identifying research priorities for the UK organic farming and food sector through the identification and analysis of the issues and aspirations that stakeholders feel should be addressed by publicly funded research into organic farming in the UK.

1. Create a collated directory of existing organic research priorities currently held by Defra from such organisations as other government funders, certification bodies, regional producer groups, levy bodies and research providers. This will be carried out in conjunction with Defra officials.

2. Create a directory of existing current and completed research in the UK particularly in relation to the priorities identified in objective 1.

3. To consult organic stakeholders to identify the issues and aspirations they feel should be addressed by publicly funded research into organic farming in the UK.

    a. Organise and facilitate up to fifteen regional public and stakeholder engagement workshops.

    b. Collate and analyse the information from the workshops to identify the issues and aspirations that should be addressed by publicly funded research into organic farming in the UK. This will include the initial analysis of the information against criteria agreed with ACOS based around the various organic action plans and IFOAM principles.

    c. Analyse and report of the consultation process.

4. Facilitate exchange of information on the project to the ACOS R&D sub-committee.

5. Provide a full final project report that is sufficiently detailed to provide an audit trail of the report's project findings and output.

**Objective 1: Create a collated directory of existing organic research priorities.** A directory of existing organic food and farming R&D priorities has been created and is contained within an Access database.

**Objective 2: Create a directory of existing current and completed research in the UK particularly in relation to the priorities identified in objective 1.** A directory of current and completed research projects has been created within an Access database. Projects were allocated to one of 12 topic criteria and an analysis was undertaken. Total funding in UK organic food and farming R&D between January 2000 and March 2005 is in the region of £45M with the majority coming from the public purse (90 *per cent)*. Most of the research is in the form of experimental research (as apposed to desk studies of extension/demonstration). Crops research is the most heavily funded area although livestock, supply chain and marketing, soil and economics and rural development also have considerable funding.

**Objective 3: To consult organic stakeholders to identify the issues and aspirations they feel should be addressed by publicly funded research into organic farming in the UK.** A series of 12 regional workshops was undertaken with stakeholders throughout the UK in addition a further 6 *ad hoc* workshops were undertaken at other organic events. Each workshop was undertaken to identify the issues and aspirations that stakeholders feel should be addressed by publicly funded research into organic farming in the UK. An Expert Group Meeting was held at the end of the process to comment on the draft output from the public workshops and also to undertake an exercise to assist with the identification of issues and aspirations. A short consultation was also undertaken on the draft findings of the public workshops.

Over 330 participants attended the workshops and meetings and identified a wide range of statements of both short and long-term issues and aspirations. These statements have been entered into an Access database, allocated to one or more of the topic criteria, analysed and a synthesis is provided in the report. They cover the whole range of the organic food and farming sector.

The consultation process as a whole was studied by a social scientist. A report was produced and conclusions and recommendations for improvement were made. The general view of the participants and delivery team of the consultation was that it was a success and it accessed organic actors that had not been involved in assisting with the development of research priorities before.

**Objective 4: Facilitate exchange of information on the project to the ACOS R&D sub-committee.** Regular meetings and information exchange was held between the project team and the ACOS R&D sub-committee and Defra.

**Objective 5: Provide a full final project report that is sufficiently detailed to provide an audit trail of the report's projects findings and output.** This report, with accompanying appendices and databases, fulfils this objective. Hard copies of all workshop documentation have been archived at Elm Farm Research Centre.

**CONCLUSIONS.**

The objectives of the work have been met in full. Data on existing priorities and projects now exist in an easily accessible format and further work on giving access to the project information is already being undertaken through the CORE Organic ERANET.

The feedback from the consultation exercise was positive and we managed to access a wide range of organic stakeholders. The mix of stakeholders was different from previous consultations with greater number of producers and consumers having an input into the consultation. This is more reflective of the organic sector. How successful the whole process has been can only be assessed once the new organic research priorities have been published and those stakeholders who participated can assess them against their own input and needs.

**FUTURE WORK.**

A directory of past and existing UK organic farming research is desirable if it is up to date and accessible. There is further ongoing work under the CORE Organic ERANET that is taking the data provided from this project and entering it onto the Organic E-Prints website (www. orgprints.org). There are also plans in place to upload Defra organic R&D final reports onto the same systems. Other research funders and providers in the UK are also being encouraged to place their research reports on e-prints. Assuming that Defra continue to do this for future projects and that research providers do the same for their non-Defra funded research this will become an invaluable resource.

If the Organic food and farming research priorities that emerge from the data collected through this report is to remain focused and relevant to UK organic stakeholders then the process of consultation and stakeholder engagement should be repeated on a regular basis. How often this should be undertaken is difficult to identified but it would be realistic to undertake an exercise that is independent of other meetings every four years in a similar cycle that Defra reviews its research programme. Prior to the consultation an audit should be undertaken on how well the existing priorities have addressed the previous consultation and how research has addressed the resulting priorities.

**RECOMMENDATIONS.**

- Project details and reports should be entered onto Organic E-Prints.
- The public consultation on issues and aspirations to be addressed by publicly funded research into organic farming in the UK should be undertaken on a 4 yearly cycle.
- An audit to be undertaken on how well the existing priorities have addressed the aspirations from the consultation and how research has addressed these priorities.

## Project Report to Defra

8. As a guide this report should be no longer than 20 sides of A4. This report is to provide Defra with details of the outputs of the research project for internal purposes; to meet the terms of the contract; and to allow Defra to publish details of the outputs to meet Environmental Information Regulation or Freedom of Information obligations. This short report to Defra does not preclude contractors from also seeking to publish a full, formal scientific report/paper in an appropriate scientific or other journal/publication. Indeed, Defra actively encourages such publications as part of the contract terms. The report to Defra should include:
   - the scientific objectives as set out in the contract;
   - the extent to which the objectives set out in the contract have been met;
   - details of methods used and the results obtained, including statistical analysis (if appropriate);
   - a discussion of the results and their reliability;
   - the main implications of the findings;
   - possible future work; and
   - any action resulting from the research (e.g. IP, Knowledge Transfer).

**Introduction & Background.**

Defra required expert scientific support for the R&D sub-committee of the Advisory Committee on Organic Standards (ACOS). Therefore the main objective of this project was to facilitate the ACOS R&D sub-committee in its function to provide advice to Defra on priorities for research needed to inform relevant UK policy making and the development of the organic sector in line with *the organic action plans for England, Wales and Scotland* and *Organic Farming in Northern Ireland: A Development Strategy*. The project will seek to identify and analyse issues and aspirations that stakeholders feel should be addressed by publicly funded organic farming research in the UK.

Stakeholders included the complete continuum of the organic sector from farmers, producers and land managers, to processors, marketers, retailers as well as consumers and the scientific community.

Over the past decade there have been a number of exercises carried out to establish the research and development requirements and priorities for the UK organic sector, for example, the UKROFS priorities in 1998 and the review in 2001. A number of the devolved UK administrations have also developed their own specific priorities (Scotland (http://www.scotland.gov.uk/Publications/2005/05/13154117/41188), Wales (http://www.organic.aber.ac.uk/research/ukrofs/index.asp) and there have been two Defra funded projects; OF0171 (1999) and OF0338 (2003) that identified and collated information on organic research projects on an EU wide level (OF0171) and in the UK (OF0338).

This project has built on past work carried out in England, Scotland and Wales. It has updated the information on past research projects and funding undertaken in OF0338. The database has also been expanded to include information on processing, marketing and food quality and safety of organic products. The study has identified and collated past research priorities; produced a directory of past and current projects and evaluated these projects against the collated priorities.

The project was also novel in that, for the first time in the UK, the process of consultation and stakeholder involvement has been studied by social scientists and recommendations have been made on how the process could be improved for future exercises.

**Objectives.**

To inform the ACOS R&D sub-committee in its work of identifying research priorities for the UK organic farming and food sector through the identification and analysis of the issues and aspirations that stakeholders feel should be addressed by publicly funded research into organic farming in the UK.

1. Create a collated directory of existing organic research priorities currently held by Defra from such organisations as other government funders, certification bodies, regional producer groups, levy bodies and research providers. This will be carried out in conjunction with Defra officials.

2. Create a directory of existing current and completed research in the UK particularly in relation to the priorities identified in objective 1.

3. To consult organic stakeholders to identify the issues and aspirations they feel should be addressed by publicly funded research into organic farming in the UK.

    a. Organise and facilitate up to fifteen regional public and stakeholder engagement workshops.

    b. Collate and analyse the information from the workshops to identify the issues and aspirations that should be addressed by publicly funded research into organic farming in the UK. This will include the initial analysis of the information against criteria agreed with ACOS based around the various organic action plans and IFOAM principles.

    c. Analyse and report of the consultation process.

4. Facilitate exchange of information on the project to the ACOS R&D sub-committee.

5. Provide a full final project report that is sufficiently detailed to provide an audit trail of the report's project findings and output.

**Objective 1: Create a collated directory of existing organic research priorities currently held by Defra from such organisations as other government funders, certification bodies, regional producer groups, levy bodies and research providers. This will be carried out in conjunction with Defra officials.**

**Approaches.**

Prior to the project Defra approached the organic and scientific communities with a request to provide them with any existing organic food and farming research and development priorities. A small number of responses were obtained from this request and were provided to the project team. Further priorities were obtained through personal communications and also from web sources.

The data was entered into an Access database and allocated one or more of the criteria outlined below (see box 1).

**Box 1: Criteria for classification of data throughout the project.**

To be able to make any sense of the data that has been gathered through this project ,there was a need to be able to consistently classify it under a number of different criteria appropriate to the organic sector. We initially looked at the criteria used within a previous Defra-funded project (OF0338) but found these classifications too restricting for the data that we had obtained. Therefore the project team, in consultation with Defra and the ACOS R&D sub-committee, agreed upon the following set of 12 criteria that will be used to classify priorities, projects and statements throughout the project.

1. Policy & Standards
2. Supply Chain & Marketing
3. Soil
4. Cropping Systems
5. Livestock Systems
6. Processing & Storage
7. Environment & Resources
8. Economics & Rural Development
9. Human Health & Food Quality
10. Research Methodologies
11. Communication, Knowledge Transfer & Education
12. Miscellaneous

**Results.**

The following table (Table 1, from the database OF0350existingpriorities.mdb) contains the priorities and names of persons/organisations where priorities were obtained. They have been sorted into the 12 priority areas. There was a poor response from those consulted and the database and Table 1 are thus not exhaustive.

Table 1: Catalogue of Existing Organic Food & Farming Priorities.

| Source | Priority |
|---|---|
| **1. Policy & Standards** | |
| Nic Lampkin | Develop improved systems for the evaluation of organic farming policies |
| UKROFS 1998 | Identify and address the barriers to be overcome to register with the PSD substances on the EC list as suitable for use in organic farming but not yet having pesticides approval in the UK |
| UKROFS 1998 | Investigate the factors which influence farmers to cease organic agricultural production with a view to identifying critical limitations to adoption of the system which may be addressed by subsequent studies. |
| Welsh Organic R&D Priorities 2004. | Testing and monitoring of organic principles in the Welsh uplands (1). |
| Welsh Organic R&D Priorities 2004. | Quantifying the environmental effects of organic farming in Wales (2). |
| Welsh Organic R&D Priorities 2004. | The scientific viability of organic standards (3=). |
| Welsh Organic R&D Priorities 2004. | Economic and environmental impacts of CAP reform on Welsh organic farm(er)s (5=). |
| SEERAD | Market constraints |
| **2. Supply Chain & Marketing** | |
| Sustainable organic vegetable systems network project | Growing for alternative markets |
| Sustainable organic vegetable systems network project | Market exchange group |
| UKROFS 1998 | Marketing strategies to enhance stability and longevity in the supply and demand of organic product including the role of co-operatives. |
| ACOS Marketing and Social Issues sub-groups | Qualitative analysis of Consumer demand for organic food. |
| ACOS Marketing and Social Issues sub-groups | Proportion of organic cereal used in this country that is home grown |
| SEERAD | Market constraints |
| SEERAD | Socio-Economic research to understand the nature and levels of demand |
| SEERAD | Identifying and resolving retailer issues |
| Project Carrot | Development and operation of fair marketing structures |
| **3. Soil** | |
| Sustainable organic vegetable systems network project | Using green waste compost a) as a source of nutrients, b) to suppress diseases (e.g. *Fusarium oxysporum* in leeks). |
| Sustainable organic vegetable systems network project | Selection of green manures with respect to fertility (especially early nitrogen release) and build up of slug populations on heavy soils. |
| Organic Systems Development Programme | Soil fertility - management for more effective use of resources |
| Organic Centre Wales (OCW) | Dynamics of faecal breakdown with respect to parasite control in sheep in long established, recently converted and conventional systems |
| NAW/Organic Strategy Group 2001 | Soil and compost biological activity and relationship to plant nutrition and health |
| NAW/Organic Strategy Group 2001 | Development of soil analysis techniques and soil quality indicators |
| UKROFS 1998 | Research should provide information on long and short term release of nutrients from these sources, contributing to nutrient budgeting techniques and the development of predictive models . |
| UKROFS 1998 | Disease control in horticultural crops: mildew, potato blight, botrytis, and canker. |
| Unattributed priorities reported to ACOS | Mineralising Organic Nitrogen. |
| Project Carrot | Soil management: including analysis and management of soil biology for crop production and health, use of high quality compost for crop health |
| **4. Cropping Systems** | |
| Sustainable organic vegetable systems network project | Using module sown companion plants to control cabbage root fly. |
| Sustainable organic vegetable systems network project | Using umbelliferous species to attract beneficial predatory insects. |
| Sustainable organic vegetable systems network project | Using green waste compost as a mulch to suppress weeds in asparagus. |
| Sustainable organic vegetable systems network project | Using alternative grasses in fertility building leys. |
| Sustainable organic vegetable systems network project | Growing for alternative markets |
| Sustainable organic vegetable systems network project | Using green waste compost a) as a source of nutrients, b) to suppress diseases (e.g. *Fusarium oxysporum* in leeks). |
| Sustainable organic vegetable systems network project | Use of compost teas. |

| Source | Priority |
|---|---|
| Sustainable organic vegetable systems network project | Selection of green manures with respect to fertility (especially early nitrogen release) and build up of slug populations on heavy soils. |
| Sustainable organic vegetable systems network project | Machinery and bed set up for optimum weed control |
| Sustainable organic vegetable systems network project | Using nematodes to control slugs. |
| Sustainable organic vegetable systems network project | Use of disease forecasting models |
| Organic Systems Development Programme | Nematode control in root crops |
| Organic Systems Development Programme | Potato bight control |
| Organic Systems Development Programme | Production methods to improve food quality, particularly in milk and vegetables |
| OCW | Research on Black Scurf control on potatoes, particularly relating to scurf levels on seed, following on disease thresholds in organic seed potatoes (in the absence of seed treatments). |
| British Poultry Council | Trials on suitable strains of slow growing birds for organic production. |
| NAW/Organic Strategy Group 2001 | Development of systems studies in a Welsh context, including use of alternative crops/crop rotations to reduce reliance on purchased feed inputs, and nutritional value of such crops for livestock |
| NAW/Organic Strategy Group 2001 | Soil and compost biological activity and relationship to plant nutrition and health |
| NAW/Organic Strategy Group 2001 | Organic seed production methods and seed health (incl. vegetables, potatoes and herbage seeds) |
| NAW/Organic Strategy Group 2001 | Variety testing/selection (including mixtures) for the Welsh (wetter west, upland) context across all crop types |
| NAW/Organic Strategy Group 2001 | Development of crops/cropping systems to reduce reliance on conventional feed inputs and improve energy/protein nutrition |
| UKROFS 1998 | R&D is required to enable organic growers to develop systems which effectively exploit fertility building crops in a way which is consistent with the production cycle and economics of organic horticulture. |
| UKROFS 1998 | Research should also develop novel systems such as intercropping for integrating fertility building into horticulture systems. |
| UKROFS 1998 | Develop control strategies for difficult weeds - i.e. couch, wild oats, blackgrass, docks and creeping thistle, including in perennial crops. |
| UKROFS 1998 | Develop rotational mechanical and other strategies for the control of broad leafed weeds based on weed/crop interaction including emergence, thresholds and competition and their impact on the seed bank. |
| UKROFS 1998 | Pest control in horticultural crops: carrot fly, cabbage root fly, wire-worms, flea beetles, aphids, codling moth, tortrix, red spider and slugs. |
| UKROFS 1998 | Identify and address the barriers to be overcome to register with the PSD substances on the EC list as suitable for use in organic farming but not yet having pesticides approval in the UK |
| UKROFS 1998 | Review and resolve technical and economic aspects of organic seed production, including the advantages and disadvantages of home saved seed, and approved approaches to control seed-borne diseases. |
| UKROFS 1998 | Develop production systems for vegetable transplants where the nutrient supply is not based on animal slaughter house by-products. |
| UKROFS 1998 | Develop alternative cropping techniques such as inter-cropping, bi-cropping (under-storey) and alley cropping for agricultural and horticultural crops. |
| UKROFS 1998 | Develop production systems for organic top and soft fruit. |
| UKFORS 1998 | Develop production systems for novel agricultural and horticultural crops building on current work on organic rotations, e.g. protein crops, oilseeds and flower crops. |
| R&D strategy for Wales 2001 | Production techniques for annual crops in the uplands. |
| R&D strategy for Wales 2001 | Organic seed production. |
| R&D strategy for Wales 2001 | Upland organic systems. |
| R&D strategy for Wales 2001 | Seed treatments for organic cereals. |
| R&D strategy for Wales 2001 | Cereal disease control (mildew). |
| R&D strategy for Wales 2001 | Blight control in potatoes. |
| R&D strategy for Wales 2001 | Composting for organic manure management. |
| R&D strategy for Wales 2001 | Organic horticulture: Identifying the most suitable crops compatible with Welsh climatic conditions. |
| Biodynamic Seed Development Project. | Treatment of seeds with juice of valerian flowers prior to sowing as recommended. |
| Biodynamic Seed Development Project. | Hot water treatment of seeds carrying 1) Alternaria, 2) septoria, 3) ringspot, 4) Blackleg and 5) smut in barley. |
| Biodynamic Seed Development Project. | Prophylactic measures against fungi – horsetail, unpasteurised milk, garlic extracts, valerian, intercrop hoeing. |
| Biodynamic Seed Development Project. | Nematode management with French marigold. |

| Source | Priority |
|---|---|
| Biodynamic Seed Development Project. | Cabbage white management with Pyrethrum flower intercropping and/or mint. |
| Biodynamic Seed Development Project. | Sowing, cultivating and harvesting of specific crops under their associated constellations. |
| Welsh Organic R&D Priorities 2004. | Improved efficiency of Welsh organic systems (including factors affecting dairy herd fertility) (5=). |
| Unattributed priorities reported to ACOS | Differentiation between organic and conventional (e.g. dairy herd health and welfare) |
| Unattributed priorities reported to ACOS | Crop Agronomics |
| Unattributed priorities reported to ACOS | Weed Control |
| Unattributed priorities reported to ACOS | Seed / Crop disease control (Wireworm, Black Scurf) |
| ACOS Marketing and Social Issues sub-groups | Proportion of organic cereal used in this country that is home grown |
| SEERAD | Crop husbandry to find cultivars suited to Scottish Conditions |
| Project Carrot | Weed control, particularly docks |
| Project Carrot | Organic rations, and consequent production of crops, for monogastrics |
| **5. Livestock Systems** | |
| Organic Systems Development Programme | Efficacy of herbal leys |
| Organic Systems Development Programme | Production methods to improve food quality, particularly in milk and vegetables |
| OCW | New systems evaluating meat and carcass quality. |
| OCW | Dynamics of faecal breakdown with respect to parasite control in sheep in long established, recently converted and conventional systems |
| British Poultry Council | Organic meat table bird chicks - look to establishing breeding standards. |
| British Poultry Council | Controlling red mite (in rearing units) |
| British Poultry Council | Encouraging birds to get out of the house (fixed houses v mobiles) |
| British Poultry Council | Amino acid requirements/relationship to bird behaviour - i.e. feather pecking and cannibalism. |
| British Poultry Council | Look at the availability of organic feed in the UK and its effect on bird performance and behaviour. |
| British Poultry Council | Range management/cover crops. |
| NAW/Organic Strategy Group 2001 | Development of systems studies in a Welsh context, including use of alternative crops/crop rotations to reduce reliance on purchased feed inputs, and nutritional value of such crops for livestock |
| NAW/Organic Strategy Group 2001 | Control of perennial weeds in pastures |
| NAW/Organic Strategy Group 2001 | Animal health, in particular parasite and mastitis control, and evaluation of alternative (homoeopathic/herbal) treatments and role of trace elements |
| NAW/Organic Strategy Group 2001 | Development of crops/cropping systems to reduce reliance on conventional feed inputs and improve energy/protein nutrition |
| UKROFS 1998 | Research into the production of pigs under an organic regime using techniques and/or substances which are approved under UKROFS Rules or are likely to be approved if a dossier is presented. |
| UKROFS 1998 | Research into egg production to develop appropriate criteria for housing and feeding systems for egg production which: are compatible with proposed EU organic poultry husbandry standards |
| UKROFS 1998 | Control of external and internal parasites in ruminants, pigs and poultry through use of substances and approved practices to include work on the control of scab, fly strike, worms, mange, husk, lice, ringworm, and red spider mite. |
| UKROFS 1998 | Control of coccidia, salmonella and campylobacter in poultry through the use of substances (including foods) and approved practices (such as stocking rates and housing systems). |
| UKROFS 1998 | Management practices to enhance immuniological competence of stock to provide alternatives to vaccines, e.g. for clostridial diseases and husk, rota virus and BVD and to reduce the reliance on veterinary medicines for problems such as mastitis. |
| R&D strategy for Wales 2001 | Upland organic systems. |
| R&D strategy for Wales 2001 | Passive and active biological control strategies for pest and disease control across a wide range of species.<br>Disease control across a wide range of species. |
| R&D strategy for Wales 2001 | Control of parasites and disease in organically managed livestock and crops. Of particular relevance in Wales would be strategies for control of roundworms in livestock, scab and footrot in sheep. |
| R&D strategy for Wales 2001 | Weed control in organically managed pasture. |
| R&D strategy for Wales 2001 | Organic grassland management- species suitability. |
| Welsh Organic R&D Priorities 2004. | Testing and monitoring of organic principles in the Welsh uplands (1). |

| Source | Priority |
|---|---|
| Welsh Organic R&D Priorities 2004. | Improved efficiency of Welsh organic systems (including factors affecting dairy herd fertility) (5=). |
| Welsh Organic R&D Priorities 2004. | Clarify whether organic farming delivers improved animal welfare in Wales (8=). |
| Unattributed priorities reported to ACOS | Differentiation between organic and conventional (e.g. dairy herd health and welfare) |
| Unattributed priorities reported to ACOS | Organic Feed (end of derogation to use non-organic) |
| Unattributed priorities reported to ACOS | Animal Disease Control (Mastitis, Helminnth) |
| SEERAD | Livestock husbandry, health and welfare |
| Project Carrot | Organic rations, and consequent production of crops, for monogastrics |
| **6. Processing & Storage** | |
| OCW | New systems evaluating meat and carcass quality. |
| SEERAD | Identifying threats to Scottish processors and how to safeguard the viability of organic processors in Scotland. |
| **7. Economics & Rural Development** | |
| NAW/Organic Strategy Group 2001 | Evaluation of economic (farm incomes, labour use, rural development) impacts of widespread adoption of organic farming in Wales and alternative models for development |
| R&D strategy for Wales 2001 | Monitoring and improving the financial performance of organic cattle and sheep production. |
| Unattributed priorities reported to ACOS | Employment, Social Impact, Rural Economy. |
| SEERAD | Market constraints |
| SEERAD | Socio-Economic research to understand the nature and levels of demand |
| SEERAD | Identifying and resolving retailer issues |
| Project Carrot | Development of benchmarking through Triple Bottom Line Accounting |
| Project Carrot | Development and operation of fair marketing structures |
| Project Carrot | Improvement of financial performance of organic farming |
| **8. Environment & Resources** | |
| Sustainable organic vegetable systems network project | Using green waste compost a) as a source of nutrients, b) to suppress diseases (e.g. Fusarium oxysporum in leeks). |
| Organic Systems Development Programme | Development of a farm auditing tool for sustainability, including nutrient and energy efficiency |
| Organic Systems Development Programme | Reduction of energy use in food production |
| Nic Lampkin | Develop environmental benchmarking for farmers |
| NAW/Organic Strategy Group 2001 | Environmental impact and enhancement of organic farming in the uplands |
| UKROFS 1998 | Re-cycling of allowable wastes where the long term sustainability of agricultural systems depends on their safe recycling to land. |
| R&D strategy for Wales 2001 | Composting for organic manure management. |
| Welsh Organic R&D Priorities 2004. | Quantifying the environmental effects of organic farming in Wales (2). |
| Welsh Organic R&D Priorities 2004. | Management of Welsh organic systems to minimise water pollution (8=). |
| Unattributed priorities reported to ACOS | Diffuse Pollution from Organic Farming in context of Water Framework directive. |
| SEERAD | The environmental impact of organic farming in Scotland. |
| Project Carrot | Soil management: including analysis and management of soil biology for crop production and health, use of high quality compost for crop health |
| **9. Human Health & Food Quality** | |
| Organic Systems Development Programme | Production methods to improve food quality, particularly in milk and vegetables |
| OCW | Linked with the FSA - Research into real pathogen risks within an organic system specific to ready to eat crops. |
| NAW/Organic Strategy Group 2001 | Quality of organic foods |
| UKROFS 1998 | Control of coccidia, salmonella and campylobacter in poultry through the use of substances (including foods) and approved practices (such as stocking rates and housing systems). |
| **10. Research Methodologies** | |
| Nic Lampkin | Continue/establish improved statistical systems in all areas |
| NAW/Organic Strategy Group 2001 | Adding value to conventional research programmes through inclusion of organic components where appropriate |

| Source | Priority |
|---|---|
| NAW/Organic Strategy Group 2001 | Development of soil analysis techniques and soil quality indicators |
| Welsh Organic R&D Priorities 2004. | Systems research between Welsh farms (5=). |
| **11. Communication, Knowledge Transfer & Education** | |
| Institute of Organic Training and Advice | The establishment of a new and unified structure for research dissemination |
| NAW/Organic Strategy Group 2001 | Effective knowledge transfer including results from conventional as well as organic research programmes |
| UKROFS 1998 | Electronic database (e.g. CD ROM, Internet). |
| UKROFS 1998 | Development of conversion planning software. |
| UKROFS 1998 | Series of leaflets. |
| Welsh Organic R&D Priorities 2004. | Knowledge transfer (3=). |
| SEERAD | Effective methods for information provision to producers |
| SEERAD | Identifying and resolving retailer issues |
| **12. Miscellaneous** | |
| None. | |

A previous consultation that was undertaken to produce the UKROFS priorities was undertaken in 1998 and review was undertaken by The Organic Centre Wales in 2001 (http://www.organic.aber.ac.uk/research/ukrofs/index.asp). The initial UKROFS priorities setting and the review were undertaken in consultation with primarily research providers (academics) and certification bodies.

**Objective 2: Create a directory of existing current and completed research in the UK particularly in relation to the priorities identified in objective 1.**

**Approaches.**

This objective was designed to update and expand existing data that were collected and reported in March 2003 during the Defra-funded project OF0338. The process followed was similar. The same comprehensive list of all UK research funders and contractors was drawn up (Appendix 1). However, individual businesses were not contacted (see Box 2). A brief questionnaire (Appendix 2) was sent to nominated individuals in organisations, following initial telephone or e-mail contact. This requested basic information on organic and related research projects (title, summary, duration, cost, source of funding, research area and relevance to organic farming). We emphasised that we wanted information on new projects since 2003 or if they had not returned information to the 2003 project information on projects from 2000.

**Box 2: Why businesses were not contacted?**

Individual businesses were not contacted as we were expecting to pick up most research projects via the research contractor. There may have been some research undertaken in-house by the individual businesses that we did not pick up within the survey. However, this research is also likely to be commercially sensitive and is unlikely to have been divulged by the business.

On the 4th March 2005 the contact people from project OF0338 were contacted to ensure that their details were still correct and to give notice that we would be requesting an update on the information sent to us in 2003. The questionnaire was e-mailed on the 12th April 2005. A reminder was sent on 25th April 2005 and again on the 29th April 2005. Final responses were received by the 1st May 2005. At this stage some key organic research providers had not responded. These research providers were chased and as a consequence we have information from all key players in the UK. However, we accept that we may not have accessed all projects and the list may not be exhaustive. We are aware of certain providers who have not responded to our repeated requests for information although we do believe that we have accessed all major organic food and farming R&D provider in the UK. We also accepted data from some sources that were unwilling to provide financial data or did not want the data published. Where EU funds are provided through other bodies, such as in Wales with Objective 1 and 2 funding, they have not been attributed to the EU but the fund holder i.e. Welsh Assembly Government.

The results of the survey were entered in an Access database (OF0350projectinfo.mdb) and allocated to the most appropriate of the criteria. These criteria are different from those used in OF0338 but are comparable. The data

were also allocated to a public, joint or private/charitable funding criteria and research type of desk, experimental or extension/demonstration. We used the financial data provided by the research provider and have not in all cases confirmed costings with the funder. Therefore there may be some projects missing if the research providers made incomplete returns.

**Warnings on extrapolation of data provided.**

We asked for details on all projects that were ongoing in the period between January 2000 and March 2005. Therefore a 3-year project may have started in 1997 and finished January 2000, or it may have started in January 2005 to complete in 2008. All projects that were ongoing in January 2000 are included. Thus the research reported refers to a period of at least eleven years. Longer-term projects (running for more than three years) would extend this period. Therefore it would not be accurate or appropriate to divide any of the figures included in this project by a 3, or 11 years and expect to obtain an annual figure.

**Results.**

The following tables (from database OF0350projectinfo.mbd) gives a summary of the findings of the 2003 and 2005 studies.

Table 2: Summary comparisons of the 2003 and 2005 organic food and farming R&D project survey.

| | 2003 | 2005 |
|---|---|---|
| **Number of projects** | 168 | 222 |
| **Months of research** | 4535 | 6297 |
| **Total Spend (£)*** | £23,578,902 | £45,187,365 |
| **Average spend per month** | £5,199 | £7,176 |

* Due to the way in which financial data has been collated, it is not appropriate to divide these figures by a number of years to obtain annual values.

The project has identified over £45M worth of research has been on going since January 2000, funded from different sources (See Table 3). The public purse funds the vast majority of this work (90 *per cent* - an increase from 85 *per cent* in 2003). Joint funding accounts for 3 *per cent* of the funds, which is similar to 2003. Private/Charitable funding accounts for 8 *per cent* (an absolute increase but a decrease in percentage from 2003).

Table 3: Numbers, amount of time and level of funding by funder type*.

| Funding | No. Projects | Months | Total spend (£) |
|---|---|---|---|
| Public | 161 | 4621 | £40,734,439 |
| Joint | 6 | 161 | £823,316 |
| Private/Charitable | 55 | 1515 | £3,629,610 |
| **Total** | **222** | **6297** | **£45,187,365** |

* Due to the way in which financial data has been collated it is not appropriate to divide these figures by a number of years to obtain annual values.

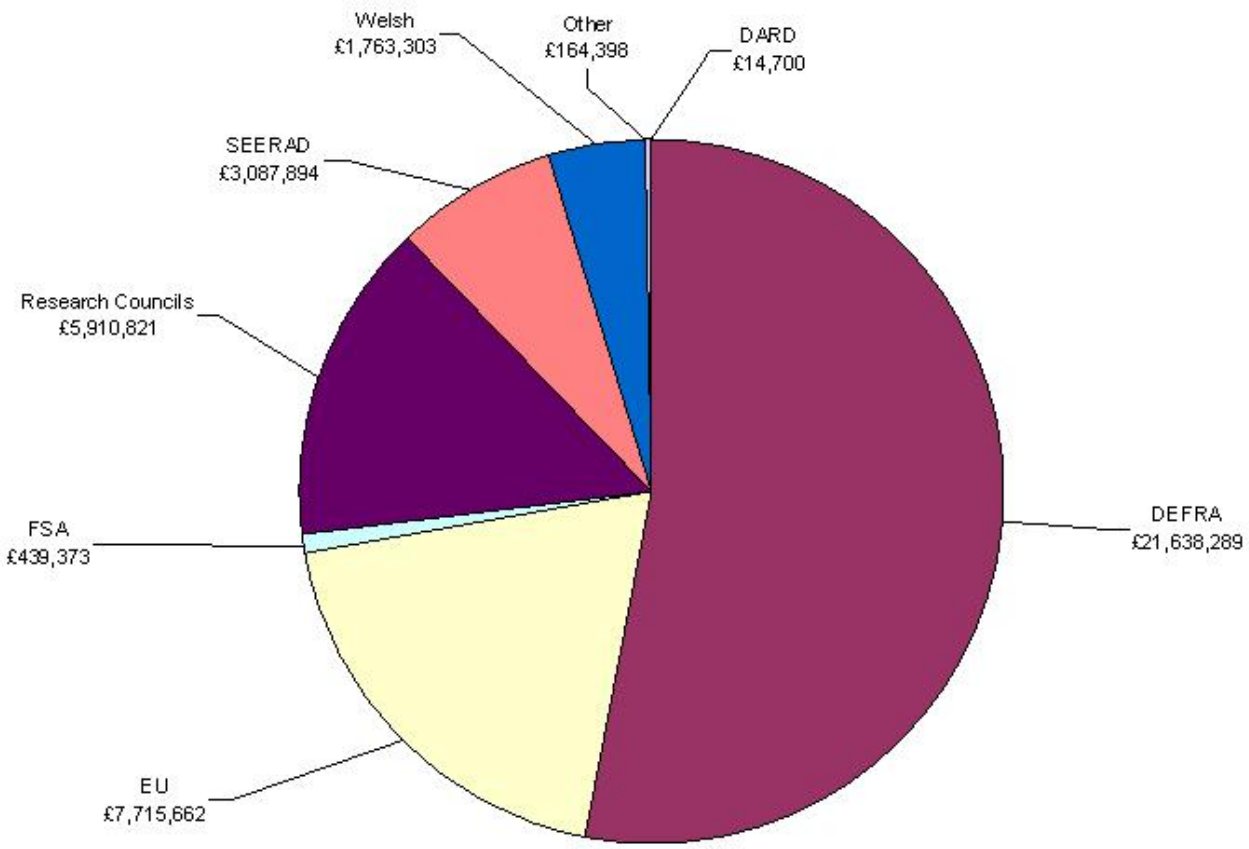
There have been changes in the breakdown of public funding during the period 2003 – 2005 (Figure 1). Defra is still by far the major funder in this area. However the launch of the Rural Economy and Land Use Programme (RELU) by the UK research councils has resulted in an increase in funding for the sector from these sources. There has also been an increase in funding from the public purse in Wales (through the Welsh Assembly Government and the Welsh Development Authority much of which would have come from EU sources).

The different types of research were also analysed. Table 4 shows the split between desk, experimental and extension/demonstration. The majority of projects, time spent and funding was on experimental research with desk studies, with nearly twice as many projects being undertaken and half as much again being spent on them over extension and demonstration. These criteria are different from the 2003 report but the number of projects has mainly increased in the experimental area.

Table 4: Breakdown of research by research type.

| Project type | No. Projects | Months | Total Spend (£) |
|---|---|---|---|
| Desk Study | 68 | 1163 | £5,187,107 |
| Experimental | 126 | 4487 | £36,787,094 |
| Extension/demonstration | 28 | 647 | £3,213,164 |
| **Total** | **222** | **6297** | **£45,187,365** |

Figure 1: Breakdown of Public funding of organic food and farming research and development in the UK 2000 – 2005 (total = £40,734,439).



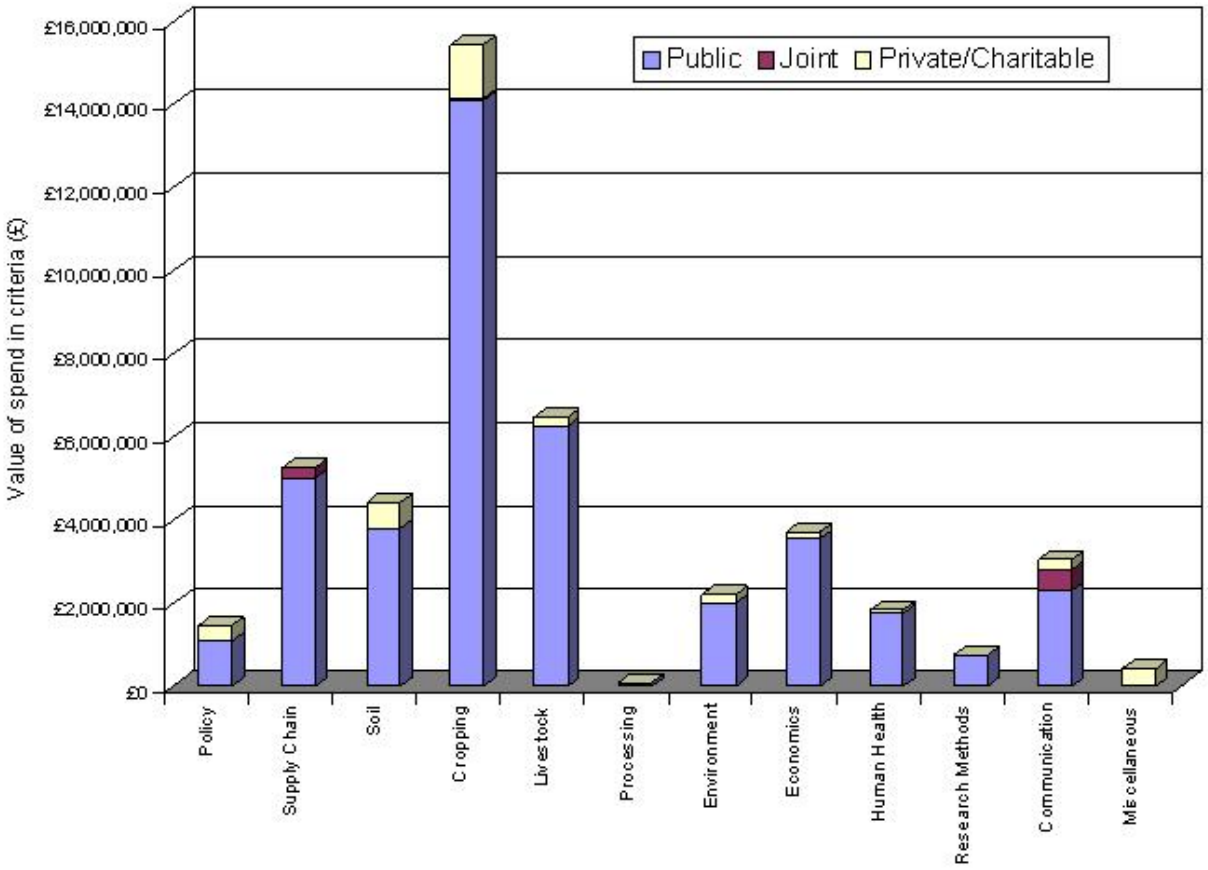

The data was analysed against the 12 criteria. Table 5 shows the project information against these criteria. The criteria in the 2003 report were slightly different but comparisons can be made. The increase in projects has mainly been focused within the cropping systems; economics and rural development and communication, knowledge transfer and education. There have also been smaller increases in the livestock systems, human health and food quality.

Table 5: Projects by classification criteria.

| Project Criteria | No. Projects | Months | Total spend (£) | % Public only |
|---|---|---|---|---|
| Policy & Standards | 20 | 454 | £1,452,429 | 77% |
| Supply Chain & Marketing | 13 | 344 | £5,282,618 | 95% |
| Soil | 15 | 498 | £4,422,956 | 86% |
| Cropping Systems | 60 | 2223 | £15,428,362 | 55% |
| Livestock Systems | 37 | 1021 | £6,485,145 | 96% |
| Processing & Storage | 2 | 60 | £101,648 | 100% |
| Environment & Resources | 15 | 289 | £2,227,788 | 90% |
| Economics & Rural Development | 21 | 424 | £3,743,441 | 95% |
| Human Health & Food Quality | 5 | 97 | £1,828,829 | 96% |
| Research Methodologies | 3 | 107 | £744,529 | 100% |
| Communication, Knowledge Transfer & Education | 30 | 720 | £3,044,620 | 75% |
| Miscellaneous | 1 | 60 | £425,000 | 0% |
| **Total** | **222** | **6297** | **£45,187,365** | |

The amount of public funds for projects within these criteria was studied (figure 2) and has not significantly changed with the exception of supply chain & marketing and economics and rural development, which is mainly due to an EU project and the new funding through RELU. The percentage of public monies within each criterion is similar with the exception of communication where public funds have increased considerably, probably through the focus of the Welsh initiatives on dissemination and knowledge transfer (much of which would have been through the EU funds accessed by Wales).

Figure 2: R&D spend by funder type as a fraction of the total spend per criteria.




**Objective 3: To consult organic stakeholders to identify the issues and aspirations they feel should be addressed by publicly funded research into organic farming in the UK.**

**3a. Organise and facilitate up to fifteen regional public and stakeholder engagement workshops.**

**Approaches.**

A series of regional workshops was undertaken with stakeholders. Each workshop was undertaken to identify the issues and aspirations that stakeholders feel should be addressed by publicly funded research into organic farming in the UK.

Twelve public workshops were held spread throughout the UK (6 in England, 3 in Scotland, 1 in Northern Ireland, and 2 in Wales) (see Appendix 4). The location of the workshops was based on the need to have a relatively even spread throughout the UK but also aimed to ensure that those areas where there were most organic producers would be given priority. The effect of this was seen most in England with a South West bias to the workshops. The workshops were held, in locations and at times, to encourage the widest possible participation and lasted between 3 and 5 hours.

A separate event was also organised at the end of the process, which we called the Expert Group Meeting. Key stakeholders were invited to the event and, in addition, to comment on the draft output from the public workshops, it also undertook an exercise to identify statements against Question 1 (see below).

The workshops were publicised through all the usual channels (e.g. websites, press releases) used by EFRC, HDRA, SAC, OCW, and Greenmount Campus NI. Information on the events was also sent to a wide range of local and regional bodies such as levy boards, county councils, regional development agencies, organic certification and producer groups, and local food groups. We also contracted OF&G to send information to all of their licence holders as well as the HDRA to write and invite 100 of their members that lived closest to the workshops to attend. Scottish Organic Producers Association (SOPA) also contacted all their licensees and the Soil Association (Scotland) mailed all their members. A web-based version of the consultation process was also established on the SAC website for those who could not attend the workshops to make contributions.

The format of the workshops was based on a recently completed exercise that EFRC undertook as part of the Organic Centre Wales exercise to establish organic food and farming R&D priorities for Wales. The research consortium member in the region led each workshop. The workshop leader introduced the project and set out its aims and objectives. A series of exercises was undertaken to establish from the stakeholders present what effects they want to see from organic farming research and development in the UK. The first workshop was held in England and was used as a learning exercise and training session for the other regional facilitators from SAC, OCW and Greenmount to ensure that there was a core, uniform approach taken to all meetings. SOPA assisted SAC in running the Scottish workshops. A series of other *ad hoc* workshops were also undertaken where facilitators could use time at other meetings to hold a workshop.

**Workshop methods**

The aim of the workshops was for the stakeholders to be able to identify and articulate the issues and aspirations that they feel should be addressed by publicly funded research into organic farming in the UK and for all participants to be heard. Workshop participants were asked to sign in and to identify themselves from a list of organic player types. The workshops addressed two questions that had been agreed with Defra/ACOS R&D sub-committee these were:

Question 1: What should R&D deliver for the organic sector by 2015?
Question 2: What are the most urgent information or knowledge gaps that R&D should address?

The workshop also set boundaries to the exercise. These boundaries were that (a) the suggestions were organic and would fit within the principles of organic food and farming; (b) would address objectives of the various UK organic action plans and (c) be deliverable by R&D (see Appendix 3). It was also stressed within the introduction of the workshop that we did not want research project titles but what the research should deliver i.e. research outputs.

An exercise called Progressive Double was employed. Participants were initially asked to pair off with a person who they did not know or did not usually work or associate with. The first question (above) was then revealed and the participants were given between 10 and 15 minutes to agree a maximum of 5 statements that address the question. Once this allotted time was over, each pair was then asked to join another pair and to repeat the process and to reduce their combined statements down to 5. This doubling continued up to groups of 16 until the whole workshop identified 5 statements.

To keep track of the development of the ideas through the workshop written records were kept from each group. At the end of the each question each participant identified his or her most important statement(s). The process was repeated for the second question.

The Expert Group Meeting was undertaken in a different manner. Key stakeholders were invited to the event (see Appendix 5) and, in addition to commenting on the draft output from the workshops, also undertook an exercise to identify statements against Question 1 above. The methodology used was different to that used in the regional workshops. Participants were split into expertise groups i.e. researchers, policy makers, certification bodies, environmental, socio-economics and, with a neutral facilitator, were asked to develop 5 statements within their area (of expertise) against Question 1. After 30 minutes the groups then moved onto another expertise area (i.e. outside their own area of expertise) and added to the statements that the first group on that area had produce. The facilitator remained with the original statements. The statements were then allocated to the 12 criteria previously defined (see box 1) and all participants were able to comment through placing notes on the statements. This methodology was employed due to the time constraints of the Expert Group Meeting as it allowed an element of idea development but would take less time than a complete progressive doubling workshop.

**3b. Collate and analyse the information from the workshops to identify the issues and aspirations that should be addressed by publicly funded research into organic farming in the UK. This will include the initial analysis of the information against criteria agreed with ACOS, based around the various organic action plans and IFOAM principles.**

**Data Analysis & Results**

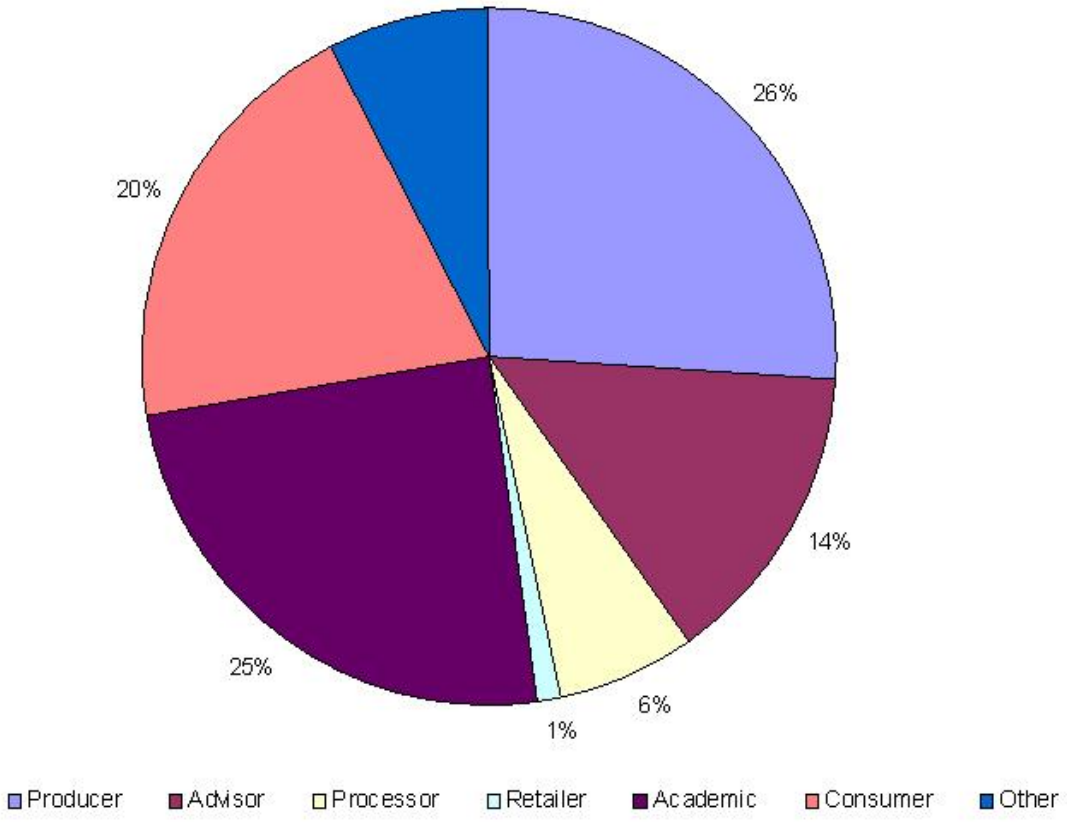
**Who attended the workshops?**

Records were kept of attendance and stakeholder type (see Figure 3a and 3b). Over 330 stakeholders attended the various workshops and a further 15 provided information through the website. Of the workshops, the Welsh and Northern Irish events were the most popular. Nearly a third of those who attended primarily classified

themselves as producers while approximately a fifth primarily classified themselves as either Consumers or Academics. There was a disappointing lack of attendance by retailers.

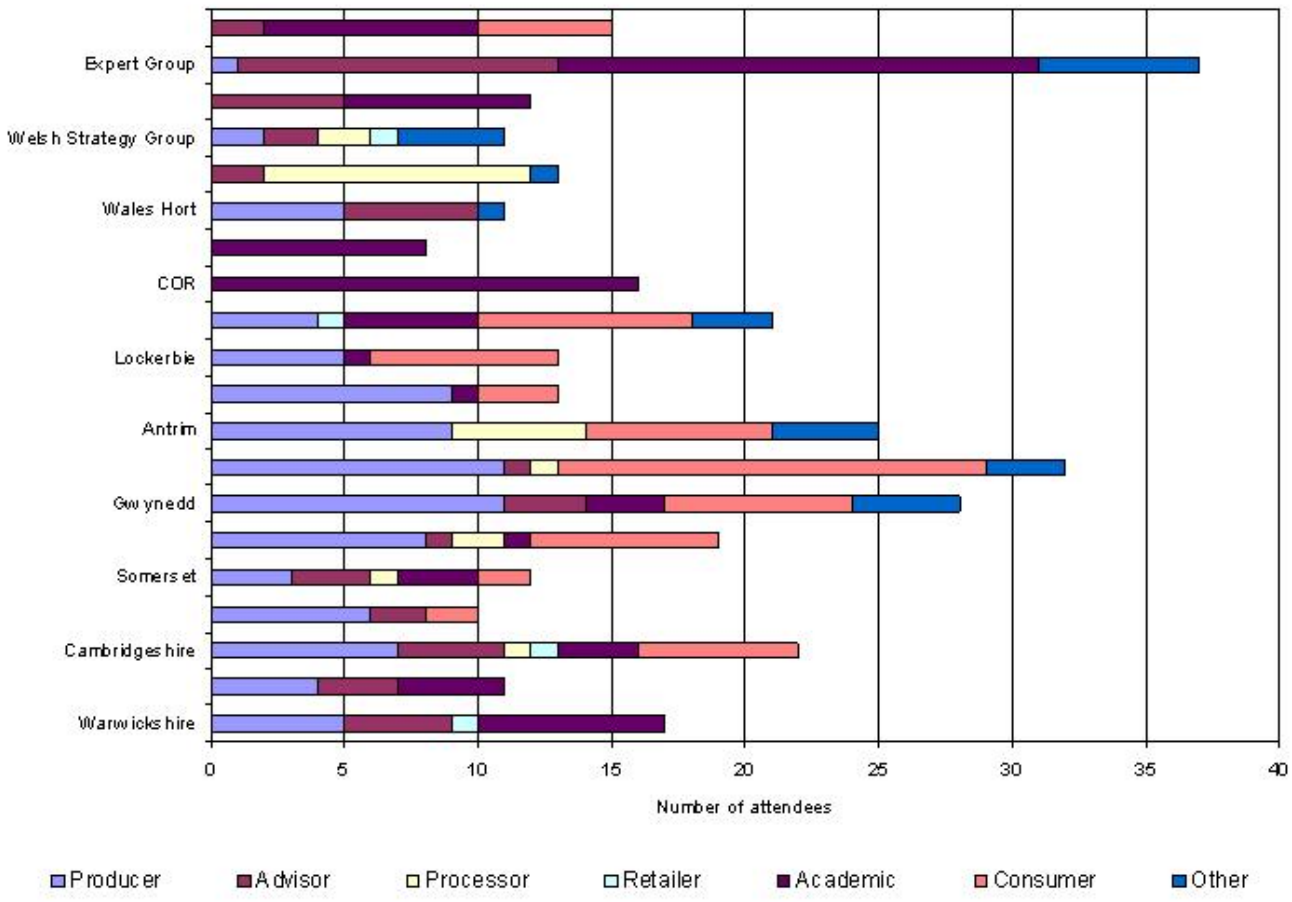
Figure 3a: Breakdown of Stakeholder type across workshops.

| Producer | Advisor | Processor | Retailer | Academic | Consumer | Other | Total |
|---|---|---|---|---|---|---|---|
| 90 | 47 | 22 | 4 | 77 | 65 | 26 | 331 |




The numbers attending the various workshops and submitting through the website were encouraging. The breakdown of the roles of the stakeholders is a little skewed with a large number of academics and a poor response from retailers. The skewing of the academics is due to the Expert Group Meeting that was heavily attended by academics. We made every attempt to encourage retailers to participate in the public workshops with little effect. Following the Expert Group Meeting we did receive comments from both Co-op and Waitrose (see Appendix 6). However, when these figures are looked at it needs to be borne in mind that previous priority setting exercises for organic farming would have accessed a considerably smaller number of stakeholders of which academics were the overwhelming majority.

Figure 3b: Breakdown of number of attendees for individual workshops by Stakeholder type.




**Workshop outputs.**

Reports of the public workshops were produced as flow diagrams and placed onto the EFRC website. The data were analysed and entered onto an Access database (OF0350workshopoutput.mdb). The statements were then allocated to one or more of the criteria (see Box 1) and filtered through whether they were organic, addressed the action plans and could be addressed by R&D. We have separated the data into three tables (Table 7, 8 and 9). These tables show the synthesised outcome of the public workshops for Question 1 (Table 7) and Question 2 (Table 8) as well as the outcome of the Expert Group Meeting (Table 9) who only answered Question 1. The Expert Group data has been kept separate as it was gathered via a different process, from a selected group of people (who were more likely to have had an agenda to push) and some had already attended the workshops around the UK. The data contained in Table 9 is of value as it informs and adds to the public workshop information.

The statements were grouped against the criteria and summaries where appropriate.

Table 7: Summary of public workshop statements for Question 1: What should R&D deliver for the organic sector by 2015?

| Criteria area | Aspirations. |
|---|---|
| 1. Policy & Standards | A unified world organic standard. |
| | A robust scientific base for organic standards and their development. |
| | Identify and resolve the barriers to certification and remaining organic for small producers. |
| | Identified and enhanced public good benefits of organic farming. |
| | 25% of agricultural land farmed organically by 2015. |
| | What are the barriers to conversion? |

| | |
|---|---|
| | Increased public procurement of organic food. |
| | To understand why do farmers choose to go in or out of organic production. |
| 2. Supply Chain & Marketing | Alternative distribution and retail systems for organic produce that shorten supply chains. |
| | Broader cross-section of people (including vulnerable/marginal groups) buying a wider range of organic produce. |
| | Increased public procurement of organic food. |
| | Better market information. |
| | More effective marketing strategies to increase demand. |
| | Better understanding of what is and drives the consumer perception of organic food. |
| | Greater understanding of what the consumer wants for small and local/regional organic businesses. |
| | Effective small-scale local production, distribution and consumption of organic food. |
| | Restore concept of consumer choice of preferences & seasonality. |
| | Collect and spread information on sources of local organic food. |
| | Fairer payments throughout the supply chain. |
| 3. Soil | Improved understanding of soil activity to enable improved soil management. |
| | Improved fertility regimes for stockless systems. |
| | Improved fertility regimes for perennial crops. |
| | Improved understanding of organic soils flora/fauna specifically mycorrhizae. |
| | Improved understanding of Nitrogen fixation, its optimum use and minimal loss. |
| | Nutrient strategies for whole farm systems. |
| 4. Cropping Systems | Better understand the likely Impacts of climate change on UK organic crop production. |
| | Effective stockless production. |
| | Evidence based organic crop breeding programme. |
| | A range of quality crop varieties that will perform well within organic systems and different localities. |
| | Effective organic crop seed production. |
| | Suitable organic growing media for vegetable transplants. |
| | Effective crop management through an understanding of the variability within the cropping system and the affects of the farmed and non-farmed areas. |
| | Optimised yield and quality of crops including extended season cropping. |

| | |
|---|---|
| | Effective crop nutrition with particular reference to perennial crops and vegetable transplant production. |
| | Effective pest management strategies including wire worm and aphid. |
| | Effective disease management strategies particularly for mildew, other fungal diseases and to replace copper. |
| | Effective weed management strategies particularly mechanical approaches and for perennial weeds. |
| | An organic landscape and amenity horticulture sector. |
| 5. Livestock Systems | A range of quality forage varieties that will perform well within organic systems and different localities. |
| | Effective organic forage and fodder seed production. |
| | Effective production of alternative protein sources throughout the UK. |
| | Effective forage production throughout the UK and in particular in less favoured areas due to climate and short growing seasons. |
| | Effective management of perennial weeds. |
| | Understanding the role of mycorrhizal associations in soil to feed value of forage. |
| | A range of quality animal breeds that will perform well within organic systems and different localities. |
| | Effective and sustainable management of parasites/pests including liver fluke. |
| | Effective and sustainable management of pathogens such as sub-clinical mastitis including alternative treatments. |
| | Defined organic parameters and develop measuring system for animal health and welfare. |
| | Integrated production systems to improve animal health and welfare including housing. |
| | Impact of an organic diet on animal health and welfare and on the quality of the end product. |
| 6. Processing & Storage | Appropriate packaging. |
| | Organic storage and processing methods that maximise the nutritional quality of the product. |
| | New innovative products to enable added value of organic food including on-farm and local processing, so as to deliver quantifiable benefits to the rural/local economy. |
| 7. Economics & Rural Development | Robust economics of the whole organic food chain (including hidden costs and the impact of farming subsidies). |
| | Quantify the advantages and disadvantages of organic farming on socio-economic factors (global/local). |
| | How to best capture (financial) benefits for small producers. (farmers markets, selling). |

| | |
|---|---|
| | Fairer payments throughout the supply chain. |
| | Improved social conditions in agriculture through alternative models such as community supported agriculture. |
| | Effective small-scale local production, distribution and consumption of organic food. |
| | The benefits of organic farming to the local economy. |
| 8. Environment & Resources | Quantified environmental costs and benefits of organic agriculture using internationally recognised environmental indicators including energy, carbon etc. |
| | Comparison of 'true' (environmental) costs of conventional agriculture compared to organic production. |
| | Improved tools to allow organic farmers to conserve natural resources. |
| | Impact of climate change on UK organic agriculture. |
| | Reduced fossil energy input to farm. |
| | Understand the dynamics of field margin and in crop flora as a refuge for predators and for their companion and ecological benefits. |
| 9. Human Health & Food Quality | Rigorous scientific evidence of the effects of organic food on human health, well-being and behaviour. |
| | Effects of fodder on animal products and then human health. |
| | Improve crop and animal husbandry techniques to improve product quality. |
| | Is organic food best value for school children in terms of health, behaviour & academic performance? |
| | Define nutritional values/quality of organic food. |
| | Effect of informed education about organic production on future generations. |
| 10. Research Methods | Wider range of stakeholders to be actively involved in research and development of organic farming. |
| | New “scientific” criteria for success. |
| 11. Communication, Knowledge Transfer & Education | By 2015 everyone knows what “organics” is - educating public/consumers. |
| | Effectively communicate the health benefits of organic produce - e.g. Jamie Oliver. |
| | Transfer of existing/new technologies to organic farming.. |
| | Improved availability of past and current research and farming knowledge. |
| | Encourage people to grow some food plants to help sustain their local environment (especially primary schools and councils). |

Table 8: Summary of workshop statements for Question 2: What are the most urgent information or knowledge gaps that R&D should address?

| Criteria area | Aspirations. |
|---|---|
| 1. Policy & Standards | The impact of the integration of Organic Farming Scheme with Good Agricultural and Environmental Condition and other agri-environment schemes. |
| | Retain Scottish producers after the conversion period – how? |
| | Effective isolation. GM v organic. |
| | Develop evidence-based systems for policy makers. |
| | Small and family farms – how best to establish and support new entrants. |
| | Benefits or dis-benefits on animal welfare of organic standards. |
| | Why have the policies put in place for organic farming not led to the expected outcome? |
| 2. Supply Chain & Marketing | Where the market is going? |
| | To get all Scotland's organic produce into the supply chain. |
| | Matching product supply and demand, local and national. |
| | Greater understanding of the organic market EU/UK/Ireland/NI. |
| | Extended season for indigenous organic produce (whole supply chain). |
| | Effective organic marketing especially at supermarkets. |
| | Merchandising of vegetables and fruit improved reducing the supermarkets cut. |
| | Information for producers on character and criteria of local marketing to increase availability for the consumer of wider range of products and in wider range of outlets. |
| | Diversification of small farm rural livelihoods, adding value and new product development ie local processing outlets, abattoir (to allow humane slaughter), brand. |
| | Solutions for small-scale local producers especially facilitating new entrants and improving local marketing. |
| | Fair distribution of profit. |
| 3. Soil | Soil science – structure (quantifying), K and biology, quantify below-ground N fixation processes. |
| | Improved soil fertility management including erosion prevention, the ideal livestock mix and density for each farm. |
| | Sustainability – soil fertility – will fertility become exhausted on land converted in recent past? Prices in face of recession and disposable income. |
| | Holistic approaches to whole farm management and soil health. |
| | Closed nutrient recycling production systems. |

| | |
|---|---|
| | Reinvestigating the methods and benefits of traditional farming e.g. companion cropping. |
| 4. Cropping Systems | Define performance parameters for breeding and selection. |
| | Suitable varieties of all crops, including fruit, for local environmental (soil and climate) conditions within the confines of organic regulations. |
| | Quality organic seed and propagation material available for all major crops – right quality, price and GM free. |
| | Yield and suitability trials in organic systems for all field crops including pest control. |
| | Pest, disease and weed management strategies that minimise the negative effects and retain the benefits particularly to replace copper and to control wireworm, slugs, carrot root fly, rosy apple aphid, apple blossom weevil, blight, septoria, blackspot and weeds in cereals and perennial weeds. |
| | Does companion cropping work? |
| | Extended season production. |
| | Link growing conditions to flavour - find systems to improve and disseminate. |
| | Effective isolation between GM and organic crops |
| | Effective home produced alternatives to peat as a growing medium. |
| | Closed nutrient recycling production systems. |
| | Improve post harvest quality control on organic farms. |
| 5. Livestock Systems | Define performance parameters for breeding and selection. |
| | Suitable breeds of all livestock for local environmental (soil and climate) conditions within the confines of organic regulations. |
| | Appropriate methods of parasite/disease control including prevention and cure for such conditions as fluke. |
| | Impact of removal of feed derogation and 100 per cent organic feed on farm businesses including mixed forage compatibility and mineral levels of both forage crops and animals and animal performance, health and welfare implications. |
| | Alternative protein for organic livestock – on farm production, fish. |
| | Less stressful slaughtering options i.e. local/mobile abattoirs. |
| | Benefits or disbenefits on animal welfare of organic standards. |
| | Increased organic egg production that delivers improved animal welfare. |
| | Market acceptable beef in 30 months. |
| 6. Processing & Storage | More local abattoirs. |
| | Improve post harvest quality control on organic farms. |
| | Long-term storage of vegetables to supply markets with UK produce fro extended season. |

| | |
|---|---|
| 7. Economics & Rural Development | Fair distribution of profit. |
| | Ways to change consumer behaviour/lifestyle - making people responsible - true cost & value of food. |
| | Diversification of small farm rural livelihoods, adding value and new product development i.e. local processing outlets, abattoir (to allow humane slaughter), brand. |
| | CAP reform – cost of production – more accurate information on the economies of organic farming. |
| | Small and family farms – how best to establish and support new entrants. |
| | Solutions for small-scale local producers and family farms especially facilitating new entrants and improving local marketing. |
| 8. Environment & Resources | Establish the differences between the environmental effects of organic and conventional production. |
| | Develop tools & assessing and improving the impacts of organic farming on biodiversity. |
| | Management systems that maximise bio-diversity benefits of organic farming. |
| | Are buffer strips and beetle banks on RSS LMC more effective and cost effective that whole organic farms? |
| | Complementary resource use across different locations to develop closed, sustainable systems. |
| | Establish an energy balance of production system. |
| | Optimised water and energy use on organic farms. |
| | Biological solutions for water quality. |
| 9. Human Health & Food Quality | Link growing conditions to flavour - find systems to improve and disseminate. |
| | Age of introduction of home economics education in schools most beneficial? |
| | Quantify the nutritive and sensory quality of organic food and implications for human health. |
| | Reduction of pathogens in the production chain. |
| 10. Research Methods | Value of long-term research. |
| 11. Communication, Knowledge Transfer & Education | Identification of an effective transfer of benefits of organic food and farming to the public including local and fair trade. |
| | More robust scientific evidence and effective transfer of information with regard to the potential health benefits of organic food. |
| | Information for producers on character and criteria of local marketing to increase availability for the consumer of wider range of products and in wider range of outlets. |
| | Northern Ireland Organic Food Directory. |
| | Up-to-date web based price/market information. |

| | |
|---|---|
| | Effective integration of producers, processors and retailers. |
| | Access to information for and from all stakeholders. |
| | Effective knowledge transfer. |
| | Mechanisation - technology transfer to small & medium growers. |
| | Develop links to local facilities (labs, universities etc. - for entomology, microbiology, climate change). |

Table 9: Summary of Expert Group Meeting statements to Question 1: What should R&D deliver for the organic sector by 2015?

| **Criteria area** | **Aspirations.** |
|---|---|
| 1. Policy & Standards | Develop the organic landscape and amenity horticulture sector. |
| | Clarify standards issues in protected cropping. |
| | What does society expect from organic food and farming and how did they develop those expectations? |
| | What policy support will shape and deliver society's expectations. |
| | Predicting impact of land use change driven by organic policy. |
| | Can one EU standard be applied fairly across 25 states? |
| | Scientifically informed and challenged standards embracing technical change that reinforce the organic principles. |
| | Comparative cost benefit analysis of investment in organic farming v other land use options. |
| 2. Supply Chain & Marketing | Why people who eat organic food appear to make better food choices. Social/cultural issues. |
| | Knowing what can be claimed for the benefits of Organic farming - identify the gaps and fill them. |
| | What do consumers expect of processed organic food and how does the industry deal with this "optimising organic processing". |
| | Transparency in the market how and does it influence actor behaviour. Market responses to economic pressure and power relationships. |
| | Deliver "fairness" in the food chain - 1st define fairness! |
| | Benchmarking for production costs. |
| | Enable growers to adapt to new markets opportunities - identifying and resolve challenges - to facilitate more local production. |
| | Identifying, assessing and managing risks arising in organic food and production. |
| | A tool kit for farmer cooperation and empowerment - what do you need to do to make cooperation work? |
| | A UK strategy for local/regional processing, storage and transport - in particular to address markets in the inner city. |

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| | An enhanced knowledge of local facilities and activities - a local hub. - fill the gaps! |
| | Improved knowledge of routes and barriers to markets, market requirements and routes into these markets for processors and producers. |
| | Identify successful and unsuccessful marketing activities in specific locations and learn from them. |
| | To know what pushes consumer buttons to buy local or regional produced food. |
| 3. Soil | Measuring impact of engineering technologies e.g. weed control - very important in arable system. |
| | Improved understanding of soil fertility and structure. |
| | Need to improve understanding of soil biology plant and animal health and environmental interactions. |
| | Soil structure. |
| 4. Cropping Systems | Measuring impact of engineering technologies e.g. weed control - very important in arable system. |
| | Improved understanding of soil fertility and structure. |
| | Enable growers to adapt to new markets opportunities - identifying and resolve challenges - to facilitate more local production. |
| | Clarify standards issues in protected cropping. |
| | Two-way technology transfer: Development of participatory methods. |
| | Clarify disease suppression properties of compost and safety issues. |
| | More profitable and resource efficient systems at all scales (within the context of organic principles). |
| | Understand the environmental footprint of organic horticulture. |
| | Soil and crop management plus production for animal and human nutrition energy plus protein plus mineral trace elements plus life force = health. |
| | Greater predictability of performance - development of comparative methods. |
| | Evaluate rotation design for fertility management and pest and disease control. |
| | Evaluate intercropping for fertility and pest and disease control. |
| | Evaluate leguminous crops - N release patterns and fixation. |
| | Improved understanding of optimal weed management - clarify the pluses and minuses of weeds! |
| | Link organic and reduced input conventional studies. |
| | Appropriate methodologies for research that cannot be conducted on farm (e.g. crop disease). |

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| | Growers and other stakeholders to be more actively involved in research and development of organic horticulture. |
| 5. Livestock Systems | Species-specific husbandry that promotes health, welfare, productivity, sustainability - including effectiveness of knowledge transfer. |
| | Surveillance, health, economics, socio-economic. |
| | Benchmarking. |
| | Animal/human/environmental interactions - zoonosis, nutritional, safety, biodiversity. |
| | Suitability of genotype for organic farming - markets, constraints etc. |
| | Scientific evidence for animal health and welfare in organic systems. |
| 6. Processing & Storage | What do consumers expect of processed organic food and how does the industry deal with this "optimising organic processing". |
| | Impact of farming technologies/systems/processing techniques on food quality (holistic Food quality). |
| 7. Economics & Rural Development | Surveillance, health, economics, socio-economic. |
| | Transparency in the market how and does it influence actor behaviour. Market responses to economic pressure and power relationships. |
| | Deliver "fairness" in the food chain - first define fairness! |
| | Benchmarking for production costs. |
| | How far organic food chains deliver social/economic benefits? - Including public health? |
| | Agreed measures for total sustainability - environment, social, economic. |
| | Cost effective series of policy measures - optimising mix to deliver multiple objectives - reconcile trade offs and conflicts. |
| | Consumer power to influence economic/ environmental situation in developing countries - role of fair trade etc - EU trade policies - joint consumer/producer consultations. |
| | Domestic food security in the context of the globalisation of food systems and alternative development paths - organic farms, Urban agriculture and Community Supported Agriculture Schemes. |
| | Organic food for all- accessibility - economic and physical. |
| | Impact of climate and social change on economics of organic farming. |
| | Define the contribution of organic farming to rural development. |
| | Impact of organic horticulture on rural development - labour issues. |
| 8. Environment & Resources | Agreed measures for total sustainability - environment, social, economic. |
| | Measuring impact of engineering technologies e.g. weed control - very important in arable system. |
| | Clarify disease suppression properties of compost and safety issues. |

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| | More profitable and resource efficient systems at all scales (within the context of organic principles). |
| | Understand the environmental footprint of organic horticulture. |
| | Develop the organic landscape and amenity horticulture sector. |
| | Improving environmental performance - pushing the top end (new technologies) - knowledge transfer and benchmarking tools. |
| | Better understanding of how quickly ecological processes change on conversion. |
| | Tools for new system design from agro-ecology not input substitution). |
| | What does “good for the environment” mean? |
| | Defining the resources used by organic farming systems - how could they be better optimised? |
| | Future proofing adapting to climate change - what can be learnt from conventional datasets and abroad? |
| | Reduce non-renewable resource use - water, hydrocarbons, soils and land. |
| 9. Human Health & Food Quality | Clarify disease suppression properties of compost and safety issues. |
| | How far organic food chains deliver social/economic benefits? - Including public health? |
| | What do consumers expect of processed organic food and how does the industry deal with this "optimising organic processing". |
| | Impact of farming technologies/systems/processing techniques on food quality (holistic food quality). |
| | Why people who eat organic food appear to make better food choices. Social/cultural issues. |
| | Impact of eating organic food on human health. |
| | Understand the health consequences (benefit) of not including prohibited aids/additives in organic food. |
| | Understanding the health consequences of plant natural defence systems build up and pathogens. |
| | Better understanding of scale and thresholds. |
| | Definition/assessment of holistic food quality. Validate scientific basis for novel methods. |
| 10. Research Methods | None. |
| 11. Communication, Knowledge Transfer & Education | Improving environmental performance - pushing the top end (new technologies) - knowledge transfer and benchmarking tools. |
| | Species-specific husbandry that promotes health, welfare, productivity, sustainability - including effectiveness of knowledge transfer. |
| | Knowing what can be claimed for the benefits of Organic farming - identify the gaps and fill them. |

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| | Use COSI website model. |
| | This must be a two way process - we have much to learn from practitioners. |
| | Variety breeding and selection for organic systems. |
| | Two-way technology transfer: Development of participatory methods. |
| | Facilitate active farmer involvement in research and development and knowledge exchange |

We also asked those who had attended the Expert Group Meeting to comment on the draft findings of the public workshops that were presented at this workshop (see Appendix 6 for full responses). The responses were varied and wide-ranging and as would have been expected from "experts" in a specific field most concentrated on their specialist areas. There was an overwhelming response that research needed to be done and a concern that the list being produced would be a difficult (and a long one) to prioritise. However, a number of responses identified and highlighted the need to ensure that existing research is not repeated and that there is a great need to disseminate the work that has already been undertaken. There was also a desire to see more effective learning between organic and non-organic research. There were few totally new statements or comments that had not been identified within the public workshops and the expert group workshop was useful in that it reinforced the statements that had been identified.

**3c. Analyse and report of the consultation process.**

**Introduction**

Dr David Gibbon who was commissioned to study the project documents, the workshop design, the planning process and the facilitation of the workshops undertook this objective. He also attended a number of the workshops as a participant observer; interacted with the workshop participants during and after the workshops through semi-structured interviews, telephone conversations and later e-mail correspondence; took part in a discussion with the workshop facilitators to record the learning process; participated in the Expert Group Meeting and contributed to the facilitation and recording of this meeting and finally, made a contribution to the final report to Defra/ACOS R&D sub-committee from the research team. The full report on the process is in Appendix 7.

**Observations on the workshops attended.**

The consultant participated in the Cornwall, Lancashire, Gwynedd and Cambridgeshire workshops. In most cases, the interaction between stakeholders worked well and resulted in some lively discussions. Many people who regarded themselves as "consumers" were well-connected to the organic movement (mostly HDRA members) and several were smallholders or growers. Many participants were not used to working in a participatory mode that required immediate interaction with others in a rapidly changing scenario. They might have preferred more time for introductions and the development of an understanding of what was to be expected. However, most got the idea quickly and became deeply engaged. For some "consumers", the first question was perhaps too general and demanding, although it did generate many early thoughts about the need for education and market access issues which were not directly the concern of many existing research systems. Some problems arose with people (usually men) who had a very specific agenda that they wished to carry through to the end of the process of doubling and summary and would dominate the proceedings.

**Facilitator feedback**

The core group discussed the workshop outcomes and also spent a little time in reflecting on the process from their own perspectives. In general, the facilitators did not have many problems conducting the workshops. The numbers attending were modest and most facilitators had sufficient assistance to manage the responses and keep the process moving along. It was felt that a little more time would have been useful, particularly during the final stages of the process.

It was suggested that the inputs from consumers were valuable and the mix of participants was thought to be beneficial. It was particularly good to have both farmers and consumers present, although there were too few farmers in some cases.

**Expert Group Meeting**

This meeting generated few new ideas under the main themes that had emerged from the public workshops. Most participants felt that the dialogue had been productive and useful as it moved through a three stage process, but several would have liked to have had more time for a concluding discussion. Several questions were raised at the end of the meeting that will need addressing in future interactions. One was how to ensure that there is sufficient weighting given to people with small or quiet voices. The methodology that was adopted was designed to cope with this but it had not always been successful.

One participant was disappointed that there were no meetings in the North East of England. Key stakeholders in this area were however informed of NW and Scottish workshops. There were people who were very keen to attend but they felt they did not get due notification and could not attend other workshops. The team assured the participants that there was wide circulation of information about the workshops, but in some cases, this information did not reach everyone.

There was interest from this group on what criteria were to be used by ACOS and Defra to select the final listing of topics for research. The response was that the basic rules and principles, as set out at all the meetings, would apply. A Defra spokesperson pointed out that there was some overlap between research needs in conventional and organic systems and hard choices had to be made between priorities. It was also made clear that other funders also support several key themes and this needed to be taken into account at an appropriate stage.

The suggestion was also made at this meeting that better use could have been made of existing user group meetings that take place on a regular basis. A quick exercise on research priorities could be accommodated by most small working groups and at annual R&D meetings. Similar suggestions came out of informal discussions in the stakeholder workshops.

**Conclusions**

The workshops were attended by a wide range of stakeholders, many of whom were able to contribute to a process in which they had previously not been involved. Some of the interactions that the workshops enabled, for example between farmers and consumers and between researchers and consumers, resulted in some new understanding of different perspectives and priorities. There was recognition in some workshops that the perspectives of processors and retailers needed greater attention. The perception by some consumers and farmers, that researchers only play a relatively minor role in current and future R&D was surprising and suggests that researchers need to develop a more effective communication system with other stakeholders about their roles and responsibilities.

The facilitation process, which involved teams of both men and women in most cases, was effective. The use of a highly participatory style was greatly appreciated by most participants once they had understood the process. However, it also allowed the opportunity for the occasional dominant actor (frequently but not exclusively male) to steer the proceedings in a particular direction. This behaviour should not be tolerated in future meetings.

The process and outputs have raised expectations amongst those who participated and it is important that the contributions made are properly recorded and taken into account in the next phase of the process. Clear promises were made in the workshops that this would happen. There was a desire to see this process repeated on a regular basis and to engage a wider group of stakeholders in the review and re-planning of existing research activities although it is accepted that this may be prohibitively expensive.

It finally remains to ask whether the questions asked in the process in the workshops go far enough in attempting to steer the direction and quality of organic research and development. Is it enough to identify what the priorities should be, or do we need to be also asking the same stakeholders how research should be conducted and who should be the main actors in the continuing process? With the growing realisation that both formal and informal research (research conducted by farmers) and participatory research (researchers, advisers and farmers as partners) have a place in the search for more sustainable and systemic solutions to problems, there is probably a case for a wider debate about the process of research itself.

**Recommendations**

The following recommendations emerged from this study:-

1. This kind of process of open, participatory consultation on organic research and development priorities should be conducted on a regular basis with a wide range of stakeholders.
2. More effort needs to be made to capture the views of key stakeholder groups who were weakly represented here. (e.g. retailers and processors)
3. In order to get better representation of different stakeholder groups, there should be a greater use of existing formal meetings. For example, farmers user groups, organic conferences, membership groups and at open days.

4. It is important to recognise that sub-groups within larger stakeholders (livestock farmers and horticultural growers, small and larger farmers) need representation in such an exercise and should be given due consideration in relation to their numbers and value to society.
5. In this kind of interaction, there is an opportunity to make more use of the open communication and interaction system between key actors. Strengths, weaknesses and gaps could be detected and addressed.
6. The use of both women and men as facilitators should remain.
7. At different times in the workshops, existing stakeholder groups should work together and also cross-stakeholder groups should interact. Some form of the carousel method of interaction could be combined with the progressive doubling approach.
8. This kind of participatory approach could be developed further interaction on other topics and also to enhance the interactions between farmers and other stakeholders. .
9. It is important to develop better ways of disseminating information about what is happening in organic R&D and also to work more on raising the awareness of organic food across a wide spectrum of consumers.

**Objective 4: Facilitate exchange of information on the project to the ACOS R&D sub-committee.**

There has been ongoing interaction between the project and the ACOS R&D sub-committee since December 2004. Chris Atkinson, Sue Fowler and Christine Watson are all members of the R&D Committee and the project team, that has ensured an excellent flow of information. Details of the information exchange are outlined below.

16 December 2004
Dr Bruce Pearce attended the R&D sub-committee Meeting in London to discuss project plans and agree objectives.

31 January/I February 2005
Bruce Pearce attended the ACOS R&D sub-committee Workshop in Oxfordshire. At this meeting the Committee agreed a model for interpreting the findings of the project. This was reflected in the process agreed in the CSG7 for the project.

Regional Workshops (February to June 2005)
ACOS R&D sub-committee members attended a number of the workshops as participants and facilitators.

26 May 2005
Christine Watson presented the initial findings from the regional workshops to the ACOS R&D sub-committee. The R&D sub-committee contributed to the design of the final workshop on 21st June and to the invite list for that workshop.

9 June 2005
Christine Watson presented the initial findings from the regional workshops to ACOS.

20 July 2005
Sue Fowler and Christine Watson discussed the analysis of the data with the project team in the light of the R&D sub-committee discussions (15 July). As a result Bruce Pearce agreed to format data from the project in a way that was directly usable by the R&D Committee for further analysis.

**Objective 5: Provide a full final project report that is sufficiently detailed to provide an audit trail of the report's projects findings and output.**

This report with accompanying annexes and databases fulfil this objective. Hard copies of all workshop documentation have been archived at Elm Farm Research Centre.

**DISCUSSION OF RESULTS AND IMPLICATIONS OF FINDINGS.**

Objective 1: The reliability of the results presented within this report is hard to establish. The existing research priorities where those that were provided to Defra and others that were identified from web searches. They are likely to be as exhaustive as is feasibly possible in the UK. Historically the Defra ROAME A and the UKROFS R&D priorities have been the main drivers of research in the UK and due to previous consultations undertaken by UKROFS probably capture UK research and certification bodies requirements. This is probably as a definitive a list as will be drawn up in the UK.

Objective 2: The reliability of the data on project information is only as good as those provided by the research providers. Some clarification and editing has been undertaken to address some Defra funded project but this may not be exhaustive. We initially allowed the research providers to define whether a project is organic research or not and then the research team also made a judgment. Therefore some projects where their organicness is questionable may not be included where others may not. There is a weakness in the process as research providers may not have provided correct or complete information to the project, which would result in incomplete data being analysed and reported.

Objective 3: The workshops brought together 331 stakeholders to participate in the process. This is a reasonable number of attendees and through the workshops, website and direct submissions we did manage to attract a cross section of the organic stakeholders in the UK. There is probably an under representation of producers in certain sectors ie dairy although the inclusion of consumers in the exercise is novel and addresses the Organic action plan objective that the growth of the organic sector should be market lead. There was some criticism of the placement of the workshops but the resources available to undertake the work meant that we could not cover all areas of the UK equally but we believe we made a workshop available in the majority of areas within the UK where the organic stakeholder population was the highest. The process used within the workshops was successful which did get stakeholders involved and talking. The questions being asked were different than is usually addressed to stakeholder (as they were asked for outcomes rather than activities) and although workshop leaders did their best to steer the groups to produce outcomes this was not always successful. This did not mean however that the information provided did not reduce the quality of data collected.

Objective 4: The study of the workshop processes was thorough and we received a high proportion of feedback from the events. Whether the workshop processes was truly successful or not will depend on the outcome of the whole exercise and the production of new research priorities by ACOS and Defra and whether stakeholders believe that they had been listened to. However, stakeholders thought the process of consultation was a good thing and welcomed being involved. There is some anecdotal information that has arisen since the completion of the workshops that if others had realised what was being undertaken by ACOS and Defra through workshops then attendance would be greater. There is also a want for the process to be undertaken on a regular basis to ensure that publicly funded organic research remains focused on the stakeholders needs.

**CONCLUSIONS.**

The objectives of the work have been met in full. Data on existing priorities and projects now exist in an easily accessible format and further work on giving access to the project information is already being undertaken through the CORE Organic ERANET.

The feedback from the consultation exercise was positive and we managed to access a wide range of organic stakeholders. The mix of stakeholders was different from previous consultations with greater number of producers and consumers having an input into the consultation. This is more reflective of the organic sector. How successful the whole process has been can only be assessed once the new organic research priorities have been published and those stakeholders who participated can assess them against their own input and needs.

**FUTURE WORK.**

A directory of past and existing UK organic farming research is desirable if it is up to date and accessible. There is further ongoing work under the CORE Organic ERANET that is taking the data provided from this project and entering it onto the Organic E-Prints website (www. orgprints.org). There are also plans in place to upload Defra organic R&D final reports onto the same systems. Other research funders and providers in the UK are also being encouraged to place their research reports on e-prints. Assuming that Defra continue to do this for future projects and that research providers do the same for their non-Defra funded research this will become an invaluable resource.

If the Organic food and farming research priorities that emerge from the data collected through this report is to remain focused and relevant to UK organic stakeholders then the process of consultation and stakeholder engagement should be repeated on a regular basis. How often this should be undertaken is difficult to identified but it would be realistic to undertake an exercise that is independent of other meetings every four years in a similar cycle that Defra reviews its research programme. Prior to the consultation an audit should be undertaken on how well the existing priorities have addressed the previous consultation and how research has addressed the resulting priorities.

**RECOMMENDATIONS.**

- Project details and reports should be entered onto Organic E-Prints.

- The public consultation on issues and aspirations to be addressed by publicly funded research into organic farming in the UK should be undertaken on a 4 yearly cycle.
- An audit to be undertaken on how well the existing priorities have addressed the aspirations from the consultation and how research has addressed these priorities.

## References to published material

9. This section should be used to record links (hypertext links where possible) or references to other published material generated by, or relating to this project.

OF0171: OF0171 : A review of current European research on organic farming.
http://www2.defra.gov.uk/research/project_data/projects.asp?M=KWS&V=OF0171&SCOPE=0

OF0338: To draw together information on organic farming research through all UK public sector, private and charitable sources.
http://www2.defra.gov.uk/research/project_data/projects.asp?M=KWS&V=OF0338&SCOPE=0

Organic Centre Wales. http://www.organic.aber.ac.uk/research/ukrofs/index.asp