



Applied Research Forum

for Farming and Food

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Chairman's foreword



I am pleased to report that the Forum's work has exceeded my expectations. We have made major progress during our second year of operation, particularly on practical outputs for subsequent knowledge transfer to the industry.

The Applied Research Forum's work is all about improving collaboration on research and knowledge transfer between the UK agricultural and horticultural levy bodies and across government.

Collaboration and sharing of knowledge often produces better results, more quickly, more cost-effectively and with more wide-scale acceptance than otherwise. And this is the ethos behind the ARF, which is proving that levy body and government collaboration can work at a practical level.

We have been tackling some of the major issues affecting farmers from all sectors, including waste, water, soil and use of organic residues.

The Forum held a successful workshop at Harper Adams with leading researchers to discuss the management issues and best practice to do with organic residues.

A workshop to discuss the waste regulations was led by ADAS and follow-up meetings were held with Defra and the Environment Agency to feed back practical suggestions and concerns that came out from the workshop.

The plans for a major workshop to translate soil management science into best practice were also put in place during the reporting period.

We have moved forward on a joined-up approach to research priorities – both between levy bodies and with other funders such as Defra, BBSRC, SEERAD and the Welsh Assembly Government. The fruits of this work have been discussed with Defra's independent Sustainable Farming and Food Research Priorities Group (RPG) and we have mapped the R&D priorities of the levy bodies onto those published by the RPG.

Our income from the seven statutory levy bodies and from conference fees during the year amounted to £24,075 and this was used to cover project work and administration. Staff time was provided free of charge from the various levy bodies and the level of hard work, enthusiasm and support in this area has been truly magnificent.

I am particularly grateful to Graham Jellis, as lead technical director, and his team at the Home-Grown Cereals Authority for their professionalism and support in providing the Forum's secretariat during the year.

I am very pleased with all the progress achieved.

I believe the work of the Forum has a vital role to play in helping our agricultural and horticultural industries to contribute towards a more sustainable UK economy.

The following pages report in more detail on our outputs during the past year.

**Peter E Barr, CBE
Chairman**

Who we are

One of the recommendations made by the Policy Commission on the Future of Farming and Food was that industry levy bodies and government should improve the co-ordination of their applied farming and food research, avoid duplication and maximise synergy. The Policy Commission envisaged the establishing of an Applied Research Forum for this purpose.

Several meetings were held by the agri-food levy bodies to develop the objectives and terms of reference of the Forum. These were agreed at a meeting of levy body chairmen on 17th December 2002.

Mission statement

"Our mission is to bring together research funders in agriculture and food to identify strategic needs, and to collaborate in addressing these by appropriate research and knowledge/technology transfer activities and by influencing government prioritisation and investment in these areas."

Membership of the Applied Research Forum 2004/05

Chairman	Peter Barr CBE	(Chairman, MLC)
Deputy Chairman	Colin Harvey	(Chairman, HDC)
Lead Technical Director	Prof. Graham Jellis	(Research & Development Director, HGCA)
Deputy Lead Technical Director	Mike Attenborough	(Technical Director, MLC)

The Chairman and Lead Technical Director, and their Deputies, are appointed on an annual basis by the levy body Chairmen.

Core members

Dr John King	(Programme Manager, BBRO)
Dr Mike Storey	(Research & Development Director, BPC)
Prof Graham Jellis	(Research & Development Director, HGCA)
Dr Annette Carey	(Technical Manager, HDC)
Brian Lindsay	(Head, Farm Management Programme, MDC)
Mike Attenborough	(Technical Director, MLC)
Dr Anthony Biddle	(Technical Director, PGRO)

Representatives of other bodies who attended in 2004/05

BBSRC	Brian Harris
DARDNI	Dr Mike Camlin
Defra	Dr Iain Williams
FSA	Alisdair Wotherspoon
NFU	Dr Helen Ferrier
NFUS	Scott Walker
SEERAD	Dr Nick Ambrose
WAG	Chris Lea

Lead Technical Director's report



Response to consultation documents

The ARF has produced responses to the following consultations:

Research Agendas in Agricultural Biotechnology-
December 2004 (AEBC)

Draft Waste Management (England and Wales)
Regulations 2005 - March 2005 (Defra, Waste
Management Division)

Review of Science in Defra - April 2005 (OST)

These responses can be read on the ARF website.

During the year the ARF met formally three times but, as the Forum has developed, many additional meetings and activities brought members together. Details of knowledge transfer events and joint publications and projects are described on pages 6-8. Other activities are described briefly below:

**Professor Graham Jellis
Lead Technical Director**

The Applied Research Forum website

<http://www.appliedresearchforum.org.uk>

The website was launched in December 2004. As well as providing information on the ARF, its membership and activities, it acts as a portal to the websites of the levy bodies and other members of the ARF.

Co-ordinating research activities

A workshop on the use of organic residues on agricultural land identified research needs and resulted in the joint funding of a project on compost use (see page 7). The ARF has been represented at meetings of the Defra Research Priorities Group http://www.defra.gov.uk/science/rpg/research_priorities.htm and, together with other funding organisations, is currently mapping levy body research activity on the research themes identified by the Group.

Links to the BBSRC are provided by Prof Graham Jellis's membership of the BBSRC Sustainable Agriculture Strategy Panel http://www.bbsrc.ac.uk/about/gov/panels/sa_intro.html and input into the AgriFood Committee through Dr Pinder Gill (MLC).

Levy bodies have provided input into the new SEERAD research strategy and the development of new programmes delivered from it. <http://www.Scotland.gov.uk/Topics/Research/15597/2543>

Knowledge transfer

The Knowledge Transfer Group was established by the ARF to raise awareness of each levy body's communication strategies and activities, and to share ideas, knowledge, experience and resources.

The goals of the group are to:

- increase efficiency and add value to each levy body's activities and their work within the industry
- explore and provide joined-up messages to the industry where possible
- prevent duplication
- share best practice and therefore benefit from a wider pool of knowledge, experience and resources.

The Group comprises specialists from each levy body who meet twice a year but are in regular contact by telephone and e-mail between meetings. Representatives from the NFU are also invited to attend these meetings so that the value of sharing experiences and exploring ideas is extended still further.

Examples of key discussion areas:

- improving communication with levy payers (e-mail, text messaging)
- targeting and improving attendance at events for levy payers
- resource management and best practice costings
- health and safety, biosecurity
- making the most of research project reports (reporting guidelines)
- soil management and protection, waste management regulations and the Water Framework Directive
- nitrate vulnerable zones (NVZs), pesticides and residues, replacing the Long Term Arrangements for Extension of Use (LTAEUs) of pesticides with Specific Off-Label Approvals (SOLAs)
- monitor farms, decision support systems, precision farming, weather data and forecasting.

Joint events and meetings

- *'Sustainable use of organic wastes on agricultural land'* – workshop held at Harper Adams University College on 7th and 8th September 2004, involving ARF members, Defra, the Environment Agency, research institutes, water boards and representatives of the agricultural industry. A more detailed report is provided on page 7.
- *'Nutrition and management for improving pig health and productivity'* – conference organised by HGCA, MLC and the Society of Feed Technologists for animal nutritionists on 4th November 2004.
- *'Waste management regulations and their impact on agriculture and horticulture'* – technical discussion meetings between levy bodies, Defra and NFU on 11th March 2005 and 23rd September 2005.
- *Soil management: a potato stakeholder meeting* (incorporating the publication of two new compaction reviews) – organised by BPC on the 6th May 2005 at the PGRO offices and invitation extended to all levy bodies.



Members of the KT Group at MLC's Pig Development Unit at Stotfold

Joint publications

These can be accessed via the Applied Research Forum website at

<http://www.appliedresearchforum.org.uk>

- *'Soil and crop management issues'* – booklet jointly funded by HGCA and BPC, circulated in 'Crops' on 18th September 2004 to 25,000 growers and agronomists.
- *'Pig producers must be on their guard'* – joint BPEX and HGCA 'Tech talk' fact sheet on grain quality, grain contaminants and good storage practice in October 2004 edition of Pig World.
- BPEX 'Tech talk' sheet in November 2004 edition of Pig World – article on MLC and HGCA joint funded nutrition project.
- HGCA and PGRO Recommended Lists – the 'NIAB/PGRO Recommended List for Pulses 2005' was included on the HGCA Recommended Lists CD-ROM for the first time in February 2005.

Sustainable use of organic 'wastes' on agricultural land: opportunities, facts and fears

A workshop held at Harper Adams University College, 7th - 8th September 2004

There is increasing pressure to ensure sustainable use of the many organic waste streams being applied to agricultural land. The ARF held a workshop to address the important issue of recycling organic wastes within different agricultural sectors, viz. livestock, horticulture and arable. Participation was by invitation and about 50 scientists, regulators and practitioners attended the workshop.

The first day was devoted to a series of presentations from commercial 'generators' of organic wastes and R&D specialists. The morning of the second day was used to explore practical aspects of managing organic wastes on commercial farms. This was followed by discussions to identify gaps in knowledge and determine whether there is common ground for the various levy bodies to prioritise and fund future research and knowledge transfer projects.

The following were identified as priority areas:

- The development of better techniques to characterise the nutritive value of organic materials and to define crop available nutrient supply, in particular nitrogen, phosphorous and sulphur.
- Providing growers with a better understanding of the nutritive and other value of organic materials - what they do and how to apply them.
- A joint levy body and Defra/EA approach to the communication of co-ordinated messages on best management practices for organic materials.

An outcome of the meeting was the joint funding (BPC, HDC and HGCA, with land fill tax credits) of work on compost use for soil improvement under field crops (see page 8).



Participants discussing issues relating to the composting of green wastes

Joint projects

During the year, the levy bodies cooperated in a number of projects, many jointly funded by other industries, for example plant breeders and the agrochemical industry. For LINK projects, support from industry partners (including levy bodies) is matched 50:50 by government. Defra is a major sponsor of the programmes covered here but funding is also provided by other government departments and research councils.

Sustainable Arable LINK Projects

<http://defrafarmingandfoodscience.csl.gov.uk/unit/floatingpage.cfm?id=1>

1. Stewardship of neonicotinoid insecticides: the potential of natural populations of *Myzus persicae* to evolve resistance.
Levy bodies: BBRO, BPC
End date: 03/07
Total cost: £348,000
2. Development of broad-spectrum disease resistance to soil-borne plant viruses of major arable crops through resistance to the virus vector *Polymyxa*.
Levy bodies: BBRO, HGCA
End date: 04/08
Total cost: £755,000
3. Sustainable Arable Farming For an Improved Environment (SAFFIE)
Levy bodies: BPC, HGCA
End date: 12/06
Total cost: £3,413,000
4. Lupins in sustainable agriculture
Levy bodies: MDC, MLC, PGRO
End date: 12/08
Total cost: £1,236,000

Sustainable Livestock Production LINK Projects

<http://defrafarmingandfoodscience.csl.gov.uk/unit/floatingpage.cfm?id=3>

5. Towards the sustainable management of the weaner pig through nutrition
Levy bodies: HGCA, MLC
End date: 09/07
Total cost: £1,170,952
6. High-sugar ryegrasses for improvement of production efficiency of ruminant livestock and reduced environmental N-pollution
Levy bodies: MDC, MLC
End date: 04/05
Total cost: £581,044

Foresight LINK Project

7. GIS based commercial high resolution agro-meteorological data, product and services on the internet (INTER-MET)
Levy bodies: BBRO, HDC, HGCA, PGRO
End date: 06/05
Total cost: £106,000

Funded by Land Fill Tax Credits

8. Compost use for soil improvement under field crops
Levy bodies: BPC, HDC, HGCA
End date: 12/06
Total cost: £130,000

Accounts

The accounts presented here cover the period from the establishment of the ARF in 2003 until the end of the last financial year (June 2005). Each of the seven levy bodies contributes £3,000 per annum towards the costs associated with running the Forum and this is administered by HGCA.

Applied Research Forum - a summary of the financial position 2003/04 and 2004/05

	2004	2005
Income and Expenditure Account		
12 Months to June 2004 and 2005	£-full figures	£-full figures
Income:-		
Subscription income @ £3,000 per member	21,000.00	21,000.00
Conference income - 7th and 8th Sept 04		3,075.00
Other income		
Total Income	21,000.00	24,075.00
Costs:-		
Website	4,003.00	8,875.10
Facilitating KT	1,000.00	
Conference costs		8,251.20
Travel	235.79	990.69
Administration & secretarial support	5,238.76	7,132.00
Annual report	770.00	
Total Costs	11,247.55	25,248.99
Net Surplus / Deficit	9,752.45	-1,173.99
Balance brought forward	0.00	9,752.45
Balance carried forward	9,752.45	8,578.46
Balance sheet as at 30th June	2004	2005
Balance on accumulated I&E Account	9,752.45	8,578.46
	9,752.45	8,578.46
Current asset debtors - HGCA	9,752.45	8,578.46
	9,752.45	8,578.46

Looking forward

The ARF is planning a major two-day workshop with Defra at Rothamsted Research entitled 'Manage your soils: grow your business' in November 2005. Maintaining long-term soil quality contributes to better quality produce – be it in arable, livestock or horticulture – and can help towards addressing a number of environmental issues such as carbon dioxide emissions and water pollution. The workshop is aimed at land managers, agricultural and environmental consultants, the scientific community and relevant government departments and industry organisations. It will explore the impact of global markets, climate change and current farming practices

on the functionality and biodiversity of soils in arable, livestock and horticultural farming systems. Attendees will debate key soil management issues with the aim of identifying research needs and knowledge transfer priorities.

The ARF will continue to engage with other research funders, for example through the Research Priorities Group and the BBSRC Sustainable Agriculture Strategy Panel, to explore synergies and joint funding opportunities.

Glossary

AEBC	Agriculture and Environment Biotechnology Commission
ARF	Applied Research Forum for Farming and Food
BBRO	British Beet Research Organisation
BBSRC	Biotechnology and Biological Sciences Research Council
BPC	British Potato Council
BPEX	British Pig Executive
DARDNI	Department of Agriculture and Rural Development, Northern Ireland
Defra	Department for Environment, Food and Rural Affairs
EA	Environment Agency
FSA	Food Standards Agency
HDC	Horticultural Development Council
HGCA	Home-Grown Cereals Authority
MDC	Milk Development Council
MLC	Meat and Livestock Commission
NFU	National Farmers' Union
NFUS	National Farmers' Union of Scotland
OST	Office of Science and Technology
PGRO	Processors and Growers Research Organisation
RPG	Defra Sustainable Farming and Food Research Priorities Group
SEERAD	Scottish Executive Environment and Rural Affairs Department
WAG	Welsh Assembly Government





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