

Cross-Institute Programme for Sustainable Soil Function



SoilCIP

Newsletter for November 2007

New Staff

Dr Andrew Neal, an environmental microbiologist, joined us on 12th November. Andy was awarded his B.Sc. (Hons) from Queen Mary College, University of London, M.Sc, and Ph.D from the University of Wales at Bangor. After one year as a Research Fellow in the Chemistry Department at Bangor, Andy took up a position at The Center for Biofilm Engineering at Montana State University, where he worked on biofilms and their role in metal immobilisation in soils and sediments. For the last five years, Andy has held an Assistant Professor position at The Savannah River Ecology Laboratory on the U.S. Department of Energy-operated Savannah River Site, studying the influence of metal contamination upon microbial populations in floodplain soils and sediments, and the effectiveness of bioremediation of uranium and chromium. He has expertise in a number of spectroscopic methods including x-ray photoelectron, x-ray absorption and Raman spectroscopies and in using hyphenated techniques such as Size Exclusion Chromatography-ICP Mass Spectrometry. Now he has joined the SoilCIP, he is hoping to combine these techniques with studies of functional gene expression in soil microbial populations to study soil microbe-metal interactions in the groups of Penny Hirsch and Steve McGrath.

Imogen Truan joined us on 5th November to work with Murray Lark, Sue Welham, Kathy Haskard, Colin Webster and me on our BBSRC project 'Towards a framework for prediction of spatially non-stationary biological variables in the managed environment', studying the emissions of the greenhouse gas nitrous oxide at a landscape scale. Imogen's main role will be collecting and then analysing soil samples from a transect across the landscape, measuring nitrous oxide emissions from the samples, and collating and tabulating the resulting data.

Visiting Scientists

Stephan Deike from the Institute of Agricultural and Nutritional Sciences, Martin-Luther-University, Halle-Wittenberg, Germany, (see last month's newsletter) left on 29th November. Before he left he gave a seminar on his research into energy use efficiency in agriculture, using results from long-term experiments in Germany and Rothamsted (Broadbalk). The modelling approach that he and his colleagues use is very similar to that used in the MEASURES model that some of us developed with colleagues from SRI. There is no English website that I can direct you to but, if you are interested in such integrative research on farm systems, watch out for:

Deike, S., *et al.* (2008) Investigations on the energy efficiency of organic and integrated farming with specific emphasis on pesticide use intensity. *European Journal of Agronomy* (in press).

Quota DTG PhD studentships

No news yet of our latest bid for a new round of Doctoral Training Grants. I've received 4 project proposals for the final studentship available from this round. The Management Board will be looking at these when we meet on 7th December with a view to advertising for a student early in the New Year. There are also 3 SoilCIP-based proposals for the Nottingham and Reading Lawes Agricultural Trust-funded PhD studentships, one with each university, that we can compete for each year.

Cross-Institute links

I presented a lecture to the Environmental Science Seminar Series at Nottingham University on 7th November, entitled 'Minimising losses of nitrogen from agriculture'.

I attended a conference at St George's House, Windsor, on 12th to 14th November on 'Climate Change and the UK Rural Economy: Impacts and Opportunities'. These closed meetings operate under 'Chatham House' rules and are intended to bring together a wide range of people with common interests, but usually very different views, about a particular topic. Speakers included Sir Don Curry, Dr Martin Parry (IPCC), Ian Warrington (Deputy Vice-Chancellor of Massey University, NZ) and Jeremy Eppel (Deputy Director of Defra's Farming for the Future Programme).

Soil Science Dinner

Andy Whitmore and I attended the Soil Science dinner at the Farmers' Club in London on 31st October, where we heard and discussed an interesting talk by Alan Thorpe, CE of NERC, 'NERC – Future Directions' in which he outlined NERC's research plans for 2007-12, described in full in the new NERC Strategy Document 'Next Generation Science for Planet Earth'. Most major soil research centres in the UK were represented, including Abertay, Lancaster, Newcastle and Reading universities, and CEH (Bangor), Macaulay and SCRI. I have a PDF of the presentation which we are free to distribute if anyone would like a copy. The NERC strategy document can be found at:

<http://www.nerc.ac.uk/about/strategy/ngscience.asp>

Media exposure

Saran Sohi was interviewed today by Tom Heap and Maggie Ayre for a Radio 4 'Costing the Earth' programme on carbon labelling of food. No idea yet when it will be broadcast but we'll try and warn everyone.

International Workshop on Agriculture, Water Management and Climate Change

I flagged this up in last month's newsletter. The deadline for registering abstracts was 30th November 2007 but contact Phil or Kit (water.coordination@bbsrc.ac.uk) if you forgot and

would still like to submit something. NB The links in the page below, cut-and-pasted from the website, do not work very well. Best to enter via the main web address:

http://www.iger.bbsrc.ac.uk/IWAM/AWMCC_Workshop/

Agriculture, Water Management and Climate Change

4-6th March 2008, MacDonald Bath Spa Hotel, Bath, UK



An international interdisciplinary workshop to examine how climate change will influence our approach to assessing and mitigating agriculture's impact on sustainable water management.

[Home](#) | [Purpose & Style](#) | [Themes](#) | [Arrangements](#) | [Registration](#) | [Abstract Submission](#)

Opening Keynote by P. Watson (Defra Chief Scientist, UK)

Themes

- **Assessing and mitigating agriculture's impact on sustainable water management**
Keynotes: P. Haygarth (IGER-NW, UK), L. Heathwaite (Lancaster, UK), C. Neal (CEH, UK), J. McDonald (Oregon, USA) and A. Sharpley (Arkansas, USA)
- **Impacts and mitigation of climate change on water resources**
Keynote: N. Arnell (Reading, UK)
- **Impacts and mitigation of climate change on the biogeochemistry and ecology of land and water**
Keynote: E. Jeppesen (NERI, Denmark)
- **Integrated and adaptive management of water and agriculture under climate change**
Keynotes: R. Betts (MetOffice, UK) and C. Pahl-Wostl (Osnabrück, Germany)



[Integrating Water and Agricultural Management \(IWAM\)](#) coordination role is funded by [Defra](#), UK. Kit Macleod and Phil Haygarth (IGER, North Wyke, UK) are the workshop organisers. Email: water.coordination@bbsrc.ac.uk

Newsletter items

I conclude with one of my regular pleas for items from you. How about abstracts of recently published papers, photos from trips or conferences, or brief conference/visit reports? Almost anything is welcome.

Keith Goulding, 30th November 2007