

Cross-Institute Programme for Sustainable Soil Function

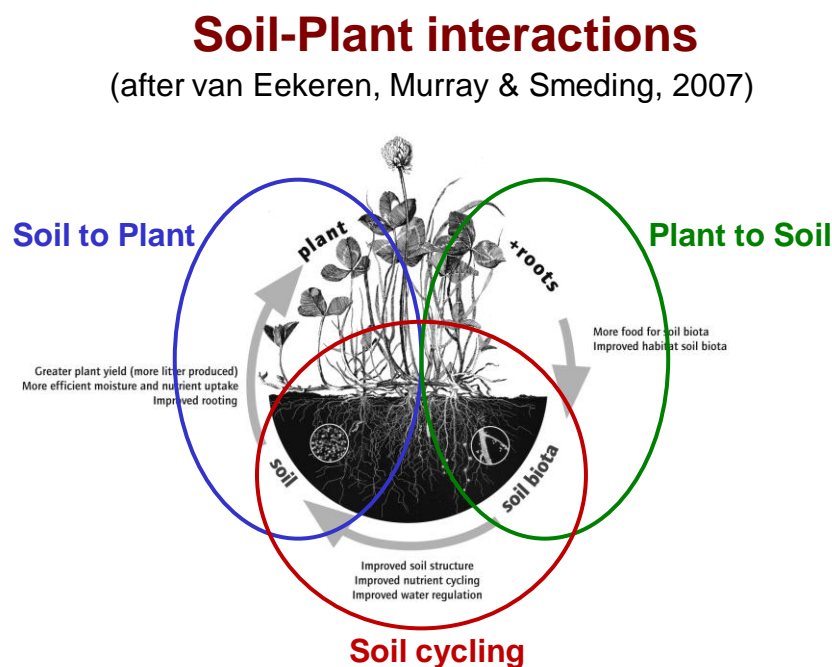
SoilCIP

Newsletter for November 2009



SoilCIP review / Next ISPG

We made good progress in agreeing some outline plans for the next soils-based ISPG at the NW Science Strategy Group meeting on 12th November and the SoilCIP ISPG meeting on 18th November. At the moment we are aiming for a 'Soil-Plant Interactions' programme with three key areas/Work Packages based on soil to plant (for crop yield and quality), plant to soil (for soil quality) and 'Soil cycling'. The diagram below, attributed to Phil Murray, describes it well although the diagram is still evolving:



Nothing is fixed but the above seems a good basis on which to develop the ISPG.

The main theme and areas that we propose to address will be presented to the HoD/HoC meeting at 4th December. Les Firbank, Steve McGrath, Phil Murray and I will be present. Once we get general agreement on the ISPGs and their main thrust we can then begin to discuss detail. However, BBSRC want only outline ISPGs next June. Detailed bids are not due until December 2010.

We need to decide the most exciting and important (especially for BBSRC strategy) areas of soil science that we want to take forward from 2012. We have to be honest

and admit that we will not be able to do it all; some work might have to be dropped. Current discussions on how to achieve a sustainable financial base for the institute will have a strong bearing on that, as well as BBSRC's Strategic Plan when launched.

By all means send me ideas but I should prefer research groups/teams to work together so that ideas are fed through group/team leaders.

Royal Society success

The proposal submitted by Penny Hirsch, Ian Clark and Phil Murray for a display entitled "Journey to the centre of the earth: the first 23 cm" at the Royal Society Summer Science Exhibition 2010 (which celebrates 350 years since the Royal Society was founded) has been successful. BBSRC were very supportive of this proposal and they will help financially and practically with preparing the exhibits. It is intended to highlight the new metagenomic approaches to soil rather than rhizosphere biology (as the title might imply) – but we envisage some eye-catching portraits of soil fauna and tubs of soil as well as more descriptive items about microbially-mediated functions (including N and C cycling). Our main problem is how to present soil metagenomics in a visually interesting and interactive display since DNA itself is not very informative prior to *in silico* analyses – but we are working on it! We will be asking colleagues for ideas (and what to avoid on displays involving soils) over the next few weeks.

The upside of this is publicity for Soil Science at Rothamsted and a set of display boards endorsed by the Royal Society. The downside is that we discovered (after being informed of our success) that the exhibition is much longer than previous Royal Society summer Exhibitions. It will be held in London's Southbank Centre (under the Royal Festival Hall) instead of the usual venue in Carlton House Terrace and will be in place for 2 weeks instead of 4 days. The exhibition will be **set up on June 21st-22nd, the Fellows of the Royal Society will visit on the 23rd, it will then be closed for 2 days and open to the public on Saturday 26th June until Sunday 4th July. This means we will need to man the exhibits for 8 days, 10 am – 8 pm**, so we will need a lot of volunteers to allow two or three shifts per day. However, the Royal Society will provide accommodation (University Halls somewhere in London) for 8 people from each display each night to help with the logistics. We hope to get plenty of Rothamsted Research volunteers, from both the main site and from North Wyke.

This is a wonderful opportunity to showcase SoilCIP research. Please e-mail Penny with offers to help.

1000th request for Roth-C

Kevin Coleman reports that he has just received the 1000th request for a copy of RothC. He received 27 requests in 1999 but 202 requests so far this year. This reflects the interest in, and usefulness of Roth-C.

Consultation on the NW Farm Platform

BBSRC has just launched this consultation:

http://www.bbsrc.ac.uk/organisation/policies/reviews/consultations/0911_north_wyke_farm_platform.html

The website says:

BBSRC is planning a significant investment in a **farm-based platform** for collaborative research at North Wyke. We are consulting on the specific investment details of the platform. The platform will underpin key strategic areas in:

- Food security
- Sustainable agricultural systems
- Agri-ecosystems services and the effects of environmental change on agriculture (which intersect the food security and living with environmental change programmes)

Consultation aim

- To guide the initial development of the platform
- To ensure that it is fit for purpose
- To ensure that it is managed to maximise benefits to potential collaborators in the science and user communities
- To engage with the local community

How to respond

Read the consultation document and e-mail your comments to the contact below by **19 December 2009**.

CONTACT:

Adam Staines
adam.staines@bbsrc.ac.uk

BBSRC wants comments from individuals, so please contribute.

SCRI programme Review

I was a member of a panel with Ted Turlings (Switzerland), John Kirkegaard (Australia) and Bill Davies (Chair, Lancaster) reviewing the Scottish Crop Research Institute's *Environment Plant Interactions* research programme from 23rd to 25th November. Members of the programme are signed-up members of the SoilCIP and we have some excellent collaborative links, especially with the Soil Physics team. I'm pleased to say that the review was very positive.

PhD studentships

Thank you for your proposals. The following projects will be advertised shortly. Start looking for good students now.

SUPERVISOR	CO-SUPERVISOR	TITLE	TYPE
A WHITMORE	-----	Novel methods to estimate soil N supply	QUOTA
R WHALLEY	-----	Computer simulation of deformation of aggregated soils with the Discrete Element Method	QUOTA
A PHILLIPS	M Parry, R Whalley	Role of wheat root architecture in determining the efficiency of water extraction from soil	QUOTA

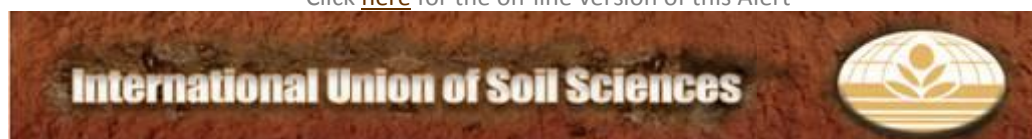
H Jones (Reading) and P HIRSCH	R Jackson, T Mauchline, L Shaw	Rhizobia diversity: the effect of farm management, soil type and environment	CASE
B FRAAIJE	T Mauchline, P Hirsch	Characterisation and bio-prospecting of endophytic bacterial microbes in wheat	IND CASE (Novozymes)

S YOUNG	F Zhao (RRes)	Modelling the fate of Se added to soil to improve biofortification efficiency	LAT-NOTT
S MOONEY	R Whalley (RRes)	Influence of roots on soil structure: physiochemical implications	LAT-NOTT
L SOCKETT	P Hirsch (RRes)	Molecular methods to evaluate the abundance diversity and predatory activity of <i>Bdellovibrio</i> against Gram-negative bacterial plant-pathogens and biocontrol agents in soils	LAT-NOTT

NORTH WYKE NERC STUDENTSHIPS

SUPERVISOR	CO-SUPERVISOR	TITLE	TYPE	PARTNER
R EVERSLED (Bristol)	A Whitmore, J Dungait (NW)	Opening the soil organic nitrogen 'black box' using dual ¹⁵ N and ¹³ C stable isotope probing	NERC (Defra funding)	Univ of Bristol
D CHADWICK (NW)	M Blackwell (NW)	Effective management of agriculturally derived endocrine disrupting chemical discharges into UK surface waters	NERC (Defra funding)	Univ of Exeter
R BOL (NW)	C Macleod (NW)	Impacts of farm-scale ecosystem management on water quality in intensively managed grasslands	NERC	----
L FIRBANK (NW)	-----	Managing grassland for ground-probing birds: linking agriculture, biodiversity and ecosystem services	NERC (Defra funding)	Univ of Newcastle

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November 2009

19th WCSS – Papers can still be submitted !



The 19th World Congress of Soil Science will be held in Australia, 1-6 August 2010 at the Brisbane Convention and Exhibition Centre. The submission dates are now as follows: Oral Papers - The final close date for papers to be considered for oral presentation at the Congress is now 30 November 2009. Poster Papers - Papers to be considered for poster presentation will now be accepted until 31st January 2010. Early registration is now also open. A comprehensive list of tours can now be seen on the website. These include Pre- and Post-Congress Tours, in addition to an interesting selection of shorter Congress Excursions available just before or after the week of the Congress. See www.19wcss.org.au

Keith Goulding, 30th November 2009