

SWESDiG Autumn Meeting, November 12th 2015

Rothamsted Research, North Wyke.

Phosphorus and soils – vital elements for agriculture

10.00 -10.30 Arrival and coffee

10.30 – 10.40 Welcome (Martin Blackwell, Rothamsted Research)

Session 1 – Phosphorus issues and cycling in agriculture, Chair Martin Blackwell

10.40 – 11.10 **Background: introduction to phosphorus and the current situation with regard to soils and phosphorus** (Phil Haygarth, Lancaster University)

11.10 – 11.30 **Can knowledge of P forms inform our designs of novel nutrient approaches in agriculture?** (Marc Stutter, James Hutton Institute)

11.30 – 11.50 **Can manipulating rhizosphere biochemistry improve the availability of organic phosphorus to plants?** (Tim George, James Hutton Institute)

11.50 – 12.10 **Phosphorus cycling in the soil-microbe-plant continuum** (John Hammond, Reading University)

12.10 – 12.30 **500 days of hedonism or two fingers to the Countess of Kesteven** (Tim Harrod)

12.30 – 1.30 Lunch

Session 2 – Methods for measuring phosphorus, Chair Tim Harrod

1.30 – 1.45 **An introduction to DGT** (Daniel Blackburn, Lancaster University)

1.45 – 2.00 **An introduction to phosphatase enzyme assays** (Tegan Darch, Rothamsted Research)

2.00 – 2.15 **Characterization of phosphorus compounds in soil using solution ³¹P NMR spectroscopy** (Courtney Giles, James Hutton Institute)

2.15 – 2.30 **Using stable isotopes of oxygen to understand phosphate cycling in soils** (Steve Granger, Rothamsted Research)

2.30 – 3.00 General Discussion

3.00 – 3.45 SWESDiG AGM (For BSSS members only)