

TAA VIST TO ROTHAMSTED RESEARCH CAMPUS AT HARPENDEN

(Organised by L&SEG)

On 30th September, 22 TAA members spent a most informative and pleasant afternoon visiting Rothamsted Research at their campus at Harpenden, which included lunch, courtesy of Rothamsted Research.

The event was arranged and hosted by Dr. Simon Vaughan Head of International Programmes. Professor John Pickett, the Head of Scientific Chemical Ecology, John Lucas Head of Rothamsted International, Dr. Michael Birkett, Deputy Head Department of Biological Chemistry and Crop Protection, and Stephen James, TAA corporate member contact within Rothamsted, joined us at lunch.

Dr. Simon Vaughan introduced Rothamsted explained the vision to be a world leading bioscience centre for sustainable agriculture.

He explained core strategic themes: 20 tonnes/ha of wheat in 20 years: optimising carbon capture by grasslands and perennial crops, seed biology, and the design, modeling and field assessment of sustainable agricultural systems.

The long-term classical experiments, which have been running since the mid 19th century, were explained. Unfortunately our visit was after the 2014 harvest so we had to be content with a talk and a visit to the archives.

Of particular interest to TAA visitors on the day was the introduction to Rothamsted North Wyke "Farm Platform" located in Devon. This comprises three independent 25hectare permanent grassland farms with hydrologically isolated fields with state-of-the-art instrumentation. This enables technologies to be tested at a whole working farm level. This seems an excellent candidate for a 2015 farm visit by TAA Land Husbandry Group and SW Region.

Dr. Vaughan explained the strong emphasis on international collaboration with a more strategic country focus than in the past and an increasing interest in developing country agriculture. The Rothamsted International Fellowship scheme and other collaborations attract increasing numbers young PhD and post-doctorate scientists in plant and soils science and agro-ecology.

Professor John Pickett gave a first class presentation of impressive work on the "push - pull" crop protection programme that he and his team are engaged in for the control of maize stem borers and the parasitic weed *Striga sp* in East Africa. This approach is based on combinations of pest attractant and repellent plant species. We very much hope that professor Pickett will provide an article for publication in our TAA journal.

Two PhD students from Latin America presented their work, which illustrates the scope of the topics being undertaken at Rothamsted:

Mr. Luis Robledo-Arratia – Department of Plant Biology and Crop Science Rothamsted Research & University of Cambridge, UK/ CIMMYT, Mexico.

"Screening mesophyll conductance to improve wheat photosynthesis"

Mr. Daniel Kumazawa Morais – Department of Agro Ecology Rothamsted Research, UK/ Universidade Federal de Viçosa, Brazil.

"Effects of crude oil on soil microbial community from Trindade Island's coastal environment – Brazil"

The visit concluded with a tour of the campus including the long-term archive and glasshouses and laboratory facilities.

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