SCRI Worldwide

Scientific research and SCRI's reputation transcend national borders. Excellent research at SCRI involves partners across the globe and from university, business and research institutes. The support from funding bodies and the scientific publications produced by SCRI scientists bear witness to our status as a world class research institute.

The countries of joint authors in scientific publications are shown in Fig.1. There were 266 collaborators in 27 European countries excluding the UK. Large tracts of the world are covered from Argentina to Japan, New Zealand to Canada, and South Africa to Estonia. Collaborations exist with China and India as well as smaller economies such as South Korea, Mozambique, Syria and the Philippines. Research is also carried out in Antarctica. All aspects of SCRI research are represented.

Over recent years SCRI has built up a portfolio of Memoranda of Understanding (MoU) with organisations to support collaboration. These cement previous relationships and provide the framework for collaborative research, the opportunity for joint funding applications, exchange of staff and information for training as well as research, and the organisation and sponsorship of seminars and conferences.

Chinese delegation visits Potatoes in Practice

SCRI and MRS have a long history of collaboration with China at the levels of national and state government, specific research institute and individual researcher. SCRI's Improving International Potato Production conference, held to mark the UN International Year of the Potato, attracted a high level delegation from China. While the delegates were in Scotland they visited SCRI and attended Potatoes in Practice. Negotiations to allow

Figure 1 Geographical location of joint authors in publications listed in Web of Science 2005 – April 2008.

the export of Scottish seed potato mini tubers to China has been facilitated by SCRI and MRS. There is an MoU in the field of potato research with Sichuan Academy of Agricultural Sciences which has involved bilateral visits. Although the focus has been on potatoes for this UN International Year of the Potato, there are collaborations in the field of soft fruit and soil science. Scientists have visited the Institute of Soil Science of the Chinese Academy of Sciences to present their research as part of an MoU and several joint articles have been published.

Research funding from the European Union encourages collaborative projects across Europe. SCRI has had success in applying for these grants; two FP7 projects awarded this year will contribute part of their overall budgets of €16.5m to SCRI. The aim of one is to produce crops with smaller requirements for added nitrogen and the aim of the other is to look at the control of meiosis and its impact on breeding new crop varieties. These add to the portfolio of EU projects in which SCRI is involved. Northern European cooperation in studying sustainable crop protection has been strengthened by MoU with Bioforsk in Norway and Instituut voor Landbouw- en Visserijonderzoek (ILVO) in Belgium. Other less formal partnerships exist at both institutional and individual scientist level, the products of which can be seen by the scientific publications and the visiting workers always to be found in Invergowrie. Scotland shares climatic conditions suitable for berry growing with many Northern European countries and collaboration in all aspects of berry research is ongoing.

The Consultative Group on International Agricultural Research (CGIAR) is an international strategic alliance with the aim of mobilising science for the benefit of the poor. SCRI has close relationships with many of the institutes but has signed MoU with the International Center for Agricultural Research in the Dry Areas (ICARDA) based in Syria and the International Potato Center (CIP) in Peru. The Director General of CIP, Dr Pamela Anderson, addressed SCRI's Improving International Potato Production conference during her visit. CIP and the Commonwealth Potato Collection regularly provide material for breeding new potato varieties. Syria is part of the area where wild barleys are found and joint working with ICARDA is very important for SCRI's genomic work on barley.

The Norwegians from Bioforsk enjoy a tractor tour of SCRI. This visit was to celebrate the MoU between the two organisations

The most recent MoU is with Michigan State University to develop collaborative programmes in the fields of crop improvement, plant and soil microbial genetics, environmental studies, horticulture and soil carbon sequestration. This and the relationship with the University of Adelaide contribute to a world class axis for genomics.

SCRI is well known for its potato research. EU funding has been won to support the Potato Genome Sequencing Consortium. This Consortium aims to map exactly where different genes responsible for traits like taste, colour, tuber shape and disease resistance reside to enable the breeding of new varieties with desirable characteristics. SCRI along with Dundee University, Imperial College London, and the Agriculture and Food Development Authority (TEAGASC), Ireland are looking at chromosome 4 with other international partners from Argentina, Brazil, Chile, China, India, Netherlands, New Zealand, Poland, Peru, Russia and the United States sequencing other chromosomes. Malawi's special relationship with Scotland has enabled them to get advice and collaboration on growing and exploiting potatoes for the benefit of their people. Visitors to SCRI included Dr Pamela Anderson, the Director General of CIP in Peru, Dr S K Pandy, Director of India's Central Potato Research Institute, and Professor Richard Visser of Wageningen University. These and delegations from Japan, Egypt, Israel, Australia, Ireland, USA, Spain attended Potatoes in Practice.