THE 2ND EUROPEAN RAMULARIA WORKSHOP – A NEW DISEASE AND CHALLENGE IN BARLEY PRODUCTION

7-8 April 2009

A workshop held at Edinburgh University focussing on a relatively new disease threat of barley called Ramularia leaf spot, attracted over 50 delegates throughout Europe. This emerging disease threat continues to spread following its recent resurgence as an economically damaging disease starting in the late 1990's. Experiences of the problem were shared between an audience of European plant pathologists, plant breeders, consultants and agrochemical manufacturers.

Recent developments in molecular techniques developed in Scotland used alongside historical plant material from Rothamsted has revealed that the fungus was present in leaves and seed samples sporadically over the past 150 years, but it has steadily increased since 1998 – the same time the disease came to the attention of field pathologists. The biggest peak in disease occurred at the same time resistance developed to strobilurin fungicides in 2001-02. The yield loss associated with the disease varies throughout Europe. The jury is still out in Denmark and England regarding the need to treat crops, but in Scotland, France, Germany and Eire it has become an established economic problem in a relatively short period of time.

Working on this disease is like working on a large jigsaw. More pieces were revealed at the meeting and new diagnostic methods are helping to put the pieces together, but there are still more unknowns regarding this problem and the best ways to manage it.

Edinburgh made a spectacular backdrop for the conference with the conference venue overlooking

Delegates enjoying the conference dinner at the Playfair Library

Conference delegates outside St Leonard's Hall, University of Edinburgh. Photographs reproduced by kind permission of Neil Havis, SAC

The disease continues to reveal new secrets, with the discovery in Germany of its presence on maize as an alternative host and spores deposited in snow. In Scotland, the linkage of spore release associated with leaf wetness and the discovery that it can develop from seed into leaf tissue and back into the developing grain show the disease is well adapted to its host. Plant stress is the key to symptom development by the fungus. Light and water play their part alongside the genetic make-up of the variety. Changes in crop development monitored in Scotland over the past 25 years may also hold a clue as to why the crops are under more stress due to an increase in average temperatures.

Arthur's seat. The delegates had one eye on the weather which in typical Scottish style covered four seasons in a day, but fortunately sunshine won the day, so there were plenty of opportunities to head for the hills and get some spectacular views of the Edinburgh skyline from the top of Arthur's seat. Some found the easy route to the top, whilst others took the more challenging pathways.

A barbeque on the first night was held indoors, since the forecast was for rain. Barbeques in Scotland remain a hit or miss affair, especially in April. The conference dinner was held in the spectacular Playfair Library in the Old University, with statues of crusty professors guarding the alcoves of historic books. The later start on the second day was a welcome respite for those who afterwards ventured into the old Town for a dram or two in the pubs down the Royal Mile.

Simon Oxley, April 2009