REPORT


The Pathology Section of the European Association for Potato Research organized a "Phytophthora infestans 150", conference, in September 1995. The conference was held in Trinity College, Dublin, to mark the one hundred and fiftieth anniversary of the first record of potato late blight in Ireland and the subsequent famine. This Section Report contains the abstracts of oral and poster presentations of this meeting.

The full papers and abstracts of the posters have been published in the proceedings of the conference, entitled Phytophthora infestans 150, edited by L.J. Dowley, E. Bannon, Louise R. Cooke, T. Keane & E. O'Sullivan, and published for the European Association for Potato Research by Boole Press Ltd, Temple Bar, Ireland, in conjunction with Teagasc, Oak Park Research Centre, Carlow, Ireland.

L.J. Dowley.
Chairman Pathology Section

E. Charles Nelson (Dublin, Ireland): The cause of the calamity: the discovery of the potato blight in Ireland, 1845–1847, and the role of the National Botanic Gardens, Glasnevin, Dublin

On 20 August 1845, the curator of the Royal Dublin Society's Botanic Gardens at Glasnevin, David Moore, noticed the first signs of a disease on the potatoes growing in the Gardens, thereby heralding the arrival of Phytophthora infestans in Ireland. David Moore carried out experiments to discover the cause of 'potato murrain' and a treatment for it. By painstaking observation he confirmed that the disease was the result of infection by the fungus and he almost discovered a method of preventing blight attacking potatoes. Moore's correspondence with the Reverend Miles J. Berkeley documents the history of the discovery of the cause of the late blight in potatoes, and of the progress of the disease throughout Ireland in 1845 and 1846.

L.J. Dowley (Carlow, Ireland): Research on Phytophthora infestans in Ireland: a short historical review

In the late 18th century and for most of the 19th century, investigations into the fungal flora in Ireland were carried out by amateurs. In the 1860s when De Bary in Germany confirmed the relationship between fungi and plant diseases the science of Plant Pathology was born. During the first three decades of the present century, Irish scientists made significant contributions to research on Phytophthora infestans. By the end of this period, a moderate level of disease control was being achieved by the
use of fungicides and during the 1930s and 1940s, research was directed more at the control of potato virus diseases. During the past four decades Irish scientists have again made significant contributions to the collective knowledge of the epidemiology and control of potato late blight.

Paul D. Peterson, Jr (Raleigh, USA): *The influence of the potato late blight epidemics of the 1840s on disease etiology theory in plants*

The potato late blight epidemics of the 1840s played an important role in the developing germ theory of disease with respect to plants. By the 1840s, although many people argued that fungi were the cause of some plant diseases, the majority believed fungi associated with disease were the results of decay in accordance with the doctrine of spontaneous generation. The protracted discourse on disease causation during the height of the late blight epidemics focused the debate between fungal theorists and autogeneticists. During the next decade, motivated in part by this polemic, pioneer leaders in plant pathology overturned the prevailing dogma of spontaneous generation with respect to plant diseases.

Z.G. Abad & J.A. Abad (Raleigh, USA): *Historical evidence on the occurrence of late blight of potato, tomato and pear melon in the Andes of South America*

Late blight caused by *Phytophthora infestans* is an important disease of potato, tomato and pear melon in South America. Present literature suggests that this disease was first found in Peru and other Andean countries in the 1920s. We have found written evidences referring to the disease on potatoes in Peru, Bolivia and Colombia published long before 1845. Among these evidences are manuscripts published in 1590 by Acosta, in 1762 in the Transactions of the Viceroy of Santa Fe de Bogota, and in 1845 by Acosta, Pazos, and D'Orbigny. In 1868, Garcia-Merino described the disease on potato, tomato and pear melon in Peru. In 1890 Lagerheim reported the susceptibility of pear melon, and *S. caripense* (pear melon wild relative) in Ecuador. In 1845, Decaisne in Belgium, and Martens in The Netherlands, reported that the recently imported varieties from Peru: “lima”, “peruvienne” and “cordillieres”, were the first that succumbed to the disease in 1845. There are several other written reports noting occurrence of the disease in the Andes of South America previous to the 1920s.

Z.G. Abad, J.A. Abad & C. Ochoa (Raleigh, USA): *Historical and scientific evidence that supports the modern theory of the Peruvian Andes as the centre of origin of Phytophthora infestans*

Although present literature suggests that late blight of potatoes is a new disease in Andean countries (first reported in the 1920s), evidence shows that it is much older in that area than it is in Central Mexico. Publications have been found describing the