

## Special issue on clubroot and blackleg diseases of brassicas - Foreword

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Published online: 23 May 2016  
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The two plant pathogens *Leptosphaeria maculans* (anamorph *Phoma lingam*), causal agent of blackleg disease, and *Plasmodiophora brassicae* Wor., causal agent of clubroot disease, are leading to significant yield and quality losses in both agricultural and horticultural brassica crops worldwide. The increasing economic and social importance of brassica crops, which are hosts to both pathogens, has enhanced and financed international

research collaborations over the past two decades. Both are aggressive and race-forming pathogens that have thrived because of intensive cropping of oilseed rape (*B. napus*). Clubroot, in particular, has caused increasing devastation in high value horticultural crops such as cauliflower or broccoli.

Extensive broad-acre field crops are frequently grown in short rotations, which include only a few non-host crops such as cereals or legumes. Farming systems increasingly include contract machinery cultivating many hectares of land in short periods with only very limited opportunities for cleaning. Both farming practices increase the incidences and spread of these diseases. High value horticultural brassicas have long been hosts to both pathogens. Brassica crops are more and more valued as contributing significantly to human health and wellbeing. Consequently, research interest in both pathogens has grown rapidly and our present knowledge has benefitted from several research initiatives.

This Special Issue of the *European Journal of Plant Pathology* is the third such publication produced in the last 7 years regarding clubroot, and is supplemented by papers on blackleg. It highlights significant advances in the understanding of both host-pathogen interactions at the populations and molecular level. Genomic studies of the brassica hosts and on the two pathogens have revealed their biology and the manner in which they interact. The drive for environmentally sustainable control has created opportunities for breeding, biological control, and agronomical measures which employ intelligent systems of integrated control. Many of the

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contributed papers result from workshops that were held during the European Foundation for Plant Pathology conference in Cracow, Poland, in 2014, and a clubroot meeting at Chungnam University, Daejeon, South Korea, in 2015. Both meetings had strong international

participation and the contributions of this Special Issue reflect the major progress in research on the two pathogens. We gratefully acknowledge the support of the Editor-in-Chief and all those who contributed to the quality of the manuscripts by their peer reviews.