

CONTENTS

Announcement/Annonce	1
Special topics/Sujets spéciaux	
Minireview/ Minisynthèse	
The wheat/ <i>Pyrenophora tritici-repentis</i> interaction: progress towards an understanding of tan spot disease <i>Lakhdar Lamari and Stephen E. Strelkov</i>	4
Symposium contribution/Contribution au symposium	
The interaction of avirulence and resistance gene products in flax rust disease – providing advances in rust research <i>A. -M. Catanzariti, P. N. Dodds, J. G. Ellis and B. J. Staskawicz</i>	11
Characterization of the wheat- <i>Stagonospora nodorum</i> disease system: what is the molecular basis of this quantitative necrotrophic disease interaction? <i>Timothy L. Friesen and Justin D. Faris</i>	20
Improving blackleg disease management of <i>Brassica napus</i> from knowledge of genetic interactions with <i>Leptosphaeria maculans</i> <i>H. R. Kutcher, F. Yu and H. Brun</i>	29
Dissecting plant defence signal transduction: modifiers of <i>snc1</i> in <i>Arabidopsis</i> <i>Jacqueline Monaghan, Hugo Germain, Tabea Weihmann and Xin Li</i>	35
Clubroot of cruciferous crops – new perspectives on an old disease <i>Ronald J. Howard, Stephen E. Strelkov and Michael W. Harding</i>	43
Verticillium wilt of potato – the pathogen, disease and management <i>Dennis A. Johnson and Jeremiah K. S. Dung</i>	58
Root diseases in forest ecosystems <i>Gaston Laflamme</i>	68
Epidemiology/Épidémiologie	
Frequency of avirulence genes in <i>Leptosphaeria maculans</i> in western Canada <i>H. R. Kutcher, M. H. Balesdent, S. R. Rimmer, T. Rouxel, A. M. Chèvre, R. Delourme and H. Brun</i>	77
Histopathology of internal fruit rot of sweet pepper caused by <i>Fusarium lactis</i> <i>Yalong Yang, Tiesen Cao, Jian Yang, Ronald J. Howard, Prem D. Kharbanda and Stephen E. Strelkov</i>	86
Genetics and resistance/Génétique et résistance	
Development of EST-derived simple sequence repeat markers for wheat leaf rust fungus, <i>Puccinia triticina</i> Eriks <i>Xiben Wang, Barbara Mulock, Bakkeren Guus and Brent McCallum</i>	98
The conservation of <i>Ustilago tritici</i> in infected seed <i>J. G. Menzies, J. Nielsen and P. L. Thomas</i>	108

CONTENTS

Special topics/Sujets spéciaux

Canadian innovations in microbial biopesticides

K. L. Bailey

113

Recent advances related to poplar leaf spot and canker caused by *Septoria musiva**N. Feau, M. -J. Mottet, P. Périnet, R. C. Hamelin and L. Bernier*

122

Disease control/Moyens de lutteIntegrated control of garlic leaf blight caused by *Stemphylium solani* in China*L. Zheng, R. Lv, J. Huang, D. Jiang, X. Liu and T. Hsiang*

135

Epidemiology/ÉpidémiologieRelative aggressiveness and production of 3- or 15-acetyl deoxynivalenol and deoxynivalenol by *Fusarium graminearum* in spring wheat*J. Gilbert, R. M. Clear, T. J. Ward, D. Gaba, A. Tekauz, T. K. Turkington, S. M. Woods, T. Nowicki and K. O'Donnell*

146

Effects of light on urediniospore germination, appressorium formation and infection efficiency of *Phakopsora pachyrhizi*, causal agent of soybean rust*X. Li, J. Mo, T. Guo and X. Yang*

153

The influence of rainfall intensity and soybean plant row spacing on the vertical distribution of wet deposited *Phakopsora pachyrhizi* urediniospores*N. S. Dufault, S. A. Isard, J. J. Marois and D. L. Wright*

162

Forest pathology/Pathologie forestière

The pathogenicity and virulence of four Ophiostomatoid fungi on young Longleaf pine trees

G. Matusick and L. G. Eckhardt

170

Genetics and resistance/Génétique et résistance

Quantification of effects of leaf spotting diseases on grain yield and market quality of durum wheat using near-isogenic lines

M. R. Fernandez, F. R. Clarke, R. E. Knox, J. M. Clarke and A. K. Singh

177

RNA profiling of fusarium head blight-resistant wheat addition lines containing the *Thinopyrum elongatum* chromosome 7E*J. -R. Wang, L. Wang, S. Gulden, H. Rocheleau, M. Balcerzak, J. Hattori, W. Cao, F. Han, Y. -L. Zheng, G. Fedak and T. Ouellet*

188

An improved method to quantify *Puccinia coronata* f. sp. *avenae* DNA in the host *Avena sativa**M. Acevedo, E. W. Jackson, A. Sturbaum, H. W. Ohm and J. M. Bonman*

215

Expression of green fluorescent protein in *Curvularia lunata* causing maize leaf spot*T. Liu, L. Liu, J. Hou, G. Li, S. Gao and J. Chen*

225

Physiological specialization of <i>Puccinia triticina</i> in Canada in 2007 <i>B. D. McCallum, P. Seto-Goh and A. Xue</i>	229
<i>Brassica</i> B-genome resistance to stem rot (<i>Sclerotinia sclerotiorum</i>) in a doubled haploid population of <i>Brassica napus</i> × <i>Brassica carinata</i> <i>Z. K. Navabi, S. E. Strelkov, A. G. Good, M. R. Thiagarajah and M. H. Rahman</i>	237
A resistance gene to <i>Ustilago nuda</i> in barley is located on chromosome 3H <i>J. G. Menzies, B. J. Steffenson and A. Kleinhofs</i>	247
Soilborne pathogens/Agents pathogènes telluriques	
Molecular characterization of Canadian populations of potato cyst nematodes, <i>Globodera rostochiensis</i> and <i>G. pallida</i> using ribosomal nuclear RNA and cytochrome <i>b</i> genes <i>M. Madani, S. A. Subbotin, L. J. Ward, X. Li and S. H. De Boer</i>	252
Characterization of <i>Globodera rostochiensis</i> (Tylenchida: Heteroderidae) associated with potato in Quebec, Canada <i>Q. Yu, W. Ye, F. Sun and S. Miller</i>	264
Prevalence and species identification of <i>Pratylenchus</i> spp. in Manitoba potato fields and host suitability of ‘Russet Burbank’ <i>A. Mahran, M. Tenuta, T. Shinnars-Carenelly, M. Mundo-Ocampo and F. Daayf</i>	272

CONTENTS

Special topics/Sujets spéciaux	
In memoriam/En mémoire: L. Lamari	283
Minireview/Minisynthèse	
Integrated management of potato silver scurf (<i>Helminthosporium solani</i>) <i>T. J. Avis, C. Martinez and R. J. Tweddell</i>	287
Bacteria and phytoplasmas/Bactéries et phytoplasmes	
Detection of aster yellows phytoplasma DNA in seed and seedlings of canola (<i>Brassica napus</i> and <i>B. rapa</i>) and AY strain identification <i>C. Y. Olivier, B. Galka and G. Séguin-Swartz</i>	298
Disease control/Moyens de lutte	
Cytokinin inhibits the growth of <i>Leptosphaeria maculans</i> and <i>Alternaria brassicae</i> <i>N. Sharma, M. H. Rahman, Y. Liang and N. N. V. Kav</i>	306
Epidemiology/Épidémiologie	
Virulence races of <i>Puccinia striiformis</i> f. sp. <i>tritici</i> in 2006 and 2007 and development of wheat stripe rust and distributions, dynamics, and evolutionary relationships of races from 2000 to 2007 in the United States <i>X. Chen, L. Penman, A. Wan and P. Cheng</i>	315
First report of Phacidiopycnis rot of pears caused by <i>Potebniamyces pyri</i> (anamorph <i>Phacidiopycnis piri</i>) in British Columbia <i>P. L. Sholberg, S. C. Stokes and D. T. O’Gorman</i>	334
Development of a semiselective medium for detection of <i>Mycosphaerella pinodes</i> in soil, plant debris and seed <i>M. -H. Chen, W. -C. Chung, H. -C. Huang and J. -W. Huang</i>	342
Forest pathology/Pathologie forestière	
Natural infection of an herbaceous host by <i>Armillaria</i> : a case study on <i>Hemerocallis</i> <i>K. E. Blaedow, K. Baumgartner, K. D. Cox and G. Schnabel</i>	351
Variation in virulence among four root-inhabiting Ophiostomatoid fungi on <i>Pinus taeda</i> L., <i>P. palustris</i> Mill, and <i>P. elliotii</i> Engelm. seedlings <i>G. Matusick and L. G. Eckhardt</i>	361
Temperature and time combinations required to cause mortality of a range of fungi colonizing wood <i>T. D. Ramsfield, R. D. Ball, J. F. Gardner and M. A. Dick</i>	368
Summer heat and an epidemic of cytospora canker of <i>Alnus</i> <i>J. J. Worrall, G. C. Adams and S. C. Tharp</i>	376
Genetics and resistance/Génétique et résistance	
The inheritance of leaf rust resistance in the wheat cultivars ‘Superb’, ‘McKenzie’ and ‘HY644’ <i>B. D. McCallum and P. Seto-Goh</i>	387

Genomics/Génomique

An inexpensive method for extraction of genomic DNA from fungal mycelia

J. Feng, R. Hwang, K. F. Chang, S. F. Hwang, S. E. Strelkov, B. D. Gossen and Q. Zhou

396

Soilborne pathogens/Agents pathogènes telluriques

Germination of *Monosporascus cannonballus* ascospores in the rhizosphere: a host-specific response

M. E. Stanghellini, T. P. Alcantara and D. M. Ferrin

402

Abstracts/Résumés

Alberta Regional Meeting, 2009/Réunion régionale de l'Alberta, 2009

406

British Columbia Regional Meeting, 2009/Réunion régionale de la Colombie-Britannique, 2009

412

Maritime Regional Meeting, 2009/Réunion régionale des Maritimes, 2009

415

Saskatchewan Regional Meeting, 2009/Réunion régionale de la Saskatchewan, 2009

421

Southwestern Ontario Regional Meeting, 2009/Réunion régionale du sud-ouest de l'Ontario, 2009

425

Corrigendum

430

CONTENTS

Biochemistry and cell biology/Biochimie et biologie cellulaire

The influence of *Ophiostoma mitovirus-3a* (OMV3a) on the respiration and growth of the dollar spot pathogen, *Sclerotinia homoeocarpa* (Bennett)

A. M. Orshinsky and G. J. Boland

431

Genomics/Génomique

Development of a SNP genetic marker system based on variation in microsatellite flanking regions of *Phytophthora infestans*

C. L. Abbott, S. R. Gilmore, C. T. Lewis, J. T. Chapados, R. D. Peters, H. W. Platt, M. D. Coffey and C. A. Lévesque

440

Epidemiology/Épidémiologie

Significance of seed infection on epidemics of mycosphaerella blight in field pea

B. D. Gossen, M. R. McDonald, R. L. Conner, S. -F. Hwang and K. -F. Chang

458

Characterization of virulence and PCR-DGGE profiles of *Fusarium avenaceum* from western Canadian Prairie Ecozone of Saskatchewan

L. Abdellatif, M. R. Fernandez, S. Bouzid and V. Vujanovic

468

Soilborne pathogens/Agents pathogènes telluriques

Effect of biopolymers on geldanamycin production and biocontrol ability of *Streptomyces melanosporofaciens* strain EF-76

N. Clermont, G. Legault, S. Lerat and C. Beaulieu

481

Disease report/Rapport des maladies

New report of *Alternaria alternata* causing leaf spot of *Aloe vera* in Pakistan

R. Bajwa, I. Mukhtar and S. Mushtaq

490

A leaf spot of figwort (*Scrophularia ningpoensis*) caused by *Phoma* sp.

M. Ni, T. Liu, Y. Ding, L. Zheng, J. Huang and T. Hsiang

493

Biochemistry and cell biology/Biochimie et biologie cellulaire

Comparison of barley seed proteomic profiles associated with fusarium head blight reaction

J. Zantinge, K. Kumar, K. Xi, M. Johns, A. Murray, T. Jones, J. H. Helm and P. Juskiw

496

Index

513