

The tenth Conference of the Australasian Plant Pathology Society Inc. held at Lincoln University, Christchurch, New Zealand from 28–30 August 1995

Titles and authors of papers and posters presented at the Conference. The abstract number is shown in parentheses after the authors and the address is for the senior author. By and large the section headings are those used for the Conference and are arranged in the same order as in the Conference program.

Disease Resistance

Components of partial resistance to anthracnose in *Stylosanthes scabra*

Boland, R.M., Chakraborty, S., Cameron, D.F., and Irwin, J.A.G. (175) CSIRO, Division of Tropical Crops and Pastures, Box 1054, Mareeba, QLD 4880 Australia

Screening of wild relatives of bread wheat for resistance to *Rhizoctonia* root rot (*Rhizoctonia solani* [AG8])

Brown, J.S., Brand, G., Exell, G., and Henry, F. (33) Agriculture Victoria, Victorian Institute for Dryland Agriculture, Private Bag 260, Horsham, VIC 3401 Australia

Resistance to silverleaf (*Chondrostereum purpureum* (Pers. Ex Fr.) Ponz.) in apple

Bus, V.G., Spiers, A.G., Brewster, D.T., and Hofstee, M.E. (173) HortResearch, Private Bag 1401, Havelock North, New Zealand

Expression of a proteinase inhibitor from *N. alata* in three different transgenic plants

Charity, J., Bittisnich, D., Anderson, M., and Higgins, T.J. (174) CSIRO, Division of Plant Industry, GPO Box 1600, Canberra, ACT 2601 Australia

Resistance to potyviruses in transgenic cucurbits

Dale, J., Bateson, M., Chaleprom, W., Chamberlain, D., Henderson, J., and Higgins, C. (2) School of Life Science, Queensland University of Technology, GPO Box 2434, Brisbane, QLD 4001 Australia

Physiological approaches to induction of resistance in plants against *Botrytis cinerea*

Elad, Y. (55) Dept. of Plant Pathology, The Volcani Center, ARO, Bet Dagan, 50250 Israel

Development of resistance to phytophthora rot in *Asparagus officinalis* L.

Falloon, P.G., and Andersen, A.M. (5) Aspara Pacific Ltd, PO Box 36, Lincoln, New Zealand

Armed and Dangerous – Secretion of phenolase inhibitors by fungal phytopathogens

Ferrar, P.H. (172) Plant and Microbial Sciences Dept., University of Canterbury, Christchurch, New Zealand

Breeding disease resistant peas (*Pisum sativum* L.) in New Zealand

Goulden, D.S., Russell, A.C., Scott, R.E., Armstrong, S.D. and Ryan, B.J. (4) New Zealand Institute for Crop & Food Research, Private Bag 4704, Christchurch, New Zealand

Wheat disease resistance breeding in New Zealand

Griffin, W. (3) New Zealand Institute for Crop & Food Research Ltd, Private Bag 4704, Christchurch, New Zealand

Molecular approaches to engineering plant resistance to cyst nematodes

Heinrich, T., Potter, R.H., and Jones, M.G.K. (27) School of Biological and Environmental Sciences, Murdoch University, Perth, WA 6150 Australia

Screening for resistance and tolerance to cereal cyst nematode in a wheat breeding program

Hollamby, G., McKay, A., and Lewis, J. (29) Roseworthy Campus, The University of Adelaide, Roseworthy, SA 5371 Australia

Durable disease resistance: An objective for plant breeders

Johnson, R. (1) 16 Coppice Avenue, Great Shelford, Cambs., United Kingdom

Resistance to *Stagonospora nodorum* in Australian and French accessions of *Triticum tauschii*

Loughman, R., and Trotter, M. (32) Department of Agriculture, South Perth, WA 6151 Australia

Induction of resistance indicators in kiwifruit by salicylic acid and other elicitors

Poole, P.R., Reglinski, T., Whitaker, G., and Whitmore, K. (208) Hort Research, Ruakura Research Centre, Private Bag 3123, Hamilton, New Zealand

Engineering resistance to root-knot nematodes in plants

Potter, R.H., Sowden, J., Carson, B., Ah-Fong, A., Herbert, S., Washer, S.J., and Jones, M.G.K. (28) Western Australian State Agricultural Biotechnology Centre, BES, Murdoch University, Perth, WA 6150 Australia

A strategy for control of raspberry grey mould (*Botrytis cinerea*) involving a polygalacturonase-inhibiting protein

Ramanathan, V., Simpson, C.G., Johnston, D.J., Iannetta, P.M.M., Thow, G., Graham, J., McNicol, R.J., and Williamson, B. (56) Scottish Crop Research Institute, Invergowrie, Dundee DD2 5DA, United Kingdom

Chocolate spot resistance in faba beans

Ramsey, M., Paull, J., and Knight, R. (206) SARDI, GPO Box 397 Adelaide, SA 5001 Australia

Resistance to *Mycosphaerella pinodes* in field peas

Ramsey, M., and Otterspoor, M. (59) SARDI, GPO Box 397, Adelaide, SA 5001 Australia

Induction of plant defence mechanisms for crop protection

Reglinski, T., Lyon, G.D., and Newton, A.C. (57) Hort Research, Ruakura Research Centre, Hamilton, New Zealand

Reaction to toxin of *Pyrenophora tritici-repentis* and its relationship to disease resistance in Australian wheats

Roake, J.E., Wellings, C.R., Ellison, F.W., and Burgess, L.W. (31) Department of Crop Sciences, The University of Sydney, NSW 2006 Australia

Identification of peas (*Pisum sativum* L.) with resistance to ascochyta blight (*Mycosphaerella pinodes*) in Southland, New Zealand

Russell, A.C., Goulden, D.S., Armstrong, S.D., Kraft, J.K., and Dunne, B. (207) New Zealand Institute for Crop & Food Research, Private Bag 4704, Christchurch, New Zealand

Resistance and tolerance to stem nematode in faba beans and field peas

Scurrah, M., and Szot, D. (60) SARDI, GPO Box 397 Adelaide, SA 5001 Australia

The expression of resistance to *Diaporthe toxica* in narrow-leafed lupins

Shankar, M., Cowling, W.A., and Sweetingham, M.W. (205) Department of Agriculture, South Perth, WA 6151 Australia

Resistance and tolerance of cereals to root lesion nematode (*Pratylenchus neglectus*) in South Australia

Vanstone, V.A., Taylor, S.P., Evans, M.L., McKay, A.C. and Rathjen, A.J. (30) Dept. of Plant Science, University of Adelaide, Waite Campus, Glen Osmond, SA 5064 Australia

Identification of the epidemiological components of partial resistance to powdery mildew in pea

Viljanen-Rollinson, S.L.H., Gaunt, R.E., Frampton, C.M., Falloon, R.E., and McNeil, D.L. (58) Department of Plant Science, Lincoln University, Canterbury, New Zealand

Control, Detection and Host-pathogen Interactions in *Phytophthora*

Evaluation of fungal and bacterial antagonists for biological control of *Phytophthora cactorum* on apple trees in New Zealand

Alexander, B.J.R., and Stewart, A. (8) School of Biological Sciences, University of Auckland, Private Bag 92019, Auckland, New Zealand

Plating method incorporated with selective media as one step isolation of antagonists against *P. cinnamomi* Rands

Aryantha, N.P., and Guest, D.I. (6) School of Botany, The University of Melbourne, Parkville, VIC 3052 Australia

Thrust reversal by mastigonemes: Immunological evidence for a role of mastigonemes in forward motion of zoospores of *Phytophthora cinnamomi*

Cahill, D.M., Cope, M., and Hardham, A.R. (111) School of Biological and Chemical Sciences, Deakin University, Clayton, VIC 3168 Australia

The evolution of races of *Phytophthora sojae* in Australia

Drenth, A., Whisson, A.C., Maclean, D.J., Irwin, J.A.G., Obst, N.R., and Ryley, M.J. (106) Cooperative Research Centre for Tropical Plant Pathology, John Hines Building, The University of Queensland, QLD 4072 Australia

Detection of fungal pathogens by polymerase chain reaction (PCR)

Farbey, M., Dobrowolski, M., Nicholson, C., and O'Brien, P.A. (246) Biotechnology Programme, School of Biological and Environmental Sciences, Murdoch University, Murdoch, WA 6150 Australia

Comparison of two methods used for the race determination of *Phytophthora clandestina* in subterranean clover

Flett, S.P., Guppy, W., and Purwantara, A. (247) Institute for Sustainable Irrigated Agriculture, Ferguson Road, Tatura, VIC 3616 Australia

Phosphonate offers a practical method for the control of *Phytophthora cinnamomi* in native plant communities

Komorek, B.M., and Shearer, B.L. (7) Department of Conservation and Land Management, Como, WA 6152 Australia

Integrated management of *Phytophthora* diseases of cocoa in Papua New Guinea

Konam, J.K., Dennis, J.C., Saul, J., Flood, J., and Guest, D. (12) PNG-CCRI, P.O. Keravat, Papua New Guinea

Specific DNA-based detection of *Phytophthora medicaginis*

Liew, E.C.Y., Maclean, D.J. and Irwin, J.A.G. (107) Cooperative Research Centre for Tropical Plant Pathology, The University of Queensland, St. Lucia, QLD 4072 Australia

Curative treatment of *Phytophthora* rootrot in kiwifruit by stem injection with phosphorous acid

Lim, T. M. (158) Institute for Sustainable Irrigated Agriculture, Ferguson Road, Tatura, VIC 3616 Australia

Strategies for applying phosphorous acid to protect and cure peach and apple trees of *Phytophthora*

Lim, T.M., and Jerie, P.H. (157) Institute for Sustainable Irrigated Agriculture, Ferguson Road, Tatura, VIC 3616 Australia

Production of superoxide radicals in tobacco cells in response to challenge by *Phytophthora* zoospores

Peters, A.J., and Sutherland, M.W. (9) Dept of Biology, Faculty of Sciences, University of Southern Queensland, Toowoomba, QLD 4350 Australia

Reactive oxygen generation and phytoalexin accumulation in incompatible interactions between *Phytophthora* and *Nicotiana*

Perrone, S., and Guest, D. (245) School of Botany, The University of Melbourne, Melbourne, VIC 3052 Australia

Race-cultivar specificity of *Phytophthora clandestina* on subterranean clover

Purwantara, A., Flett, S.P., and Keane, P.J. (248) School of Botany, La Trobe University, Bundoora, VIC 3083 Australia

Control of *Phytophthora* leaf blight in taro (*Colocasia esculenta*) with phosphorous acid

Semisi, S.T., Mauga, T and Chan, T. (Abstract not in Conference Proceedings) Research Division, Ministry of Agriculture, Forests, Fisheries & Meteorology, Western Samoa

Biological control of *Phytophthora clandestina* root rot of subterranean clover by antagonistic root-associated bacteria

Simpfendorfer, S.R., Harden, T.J., and Murray, G.M. (10) School of Science and Technology, Charles Sturt University, Wagga Wagga, NSW 2678 Australia

Measurement of the production of reactive oxygen species during host plant responses to infection

Sutherland, M.W., Peters, A.J., and Learmonth, B.A. (109) Dept of Biology, Faculty of Sciences, University of Southern Queensland, Toowoomba QLD 4350 Australia

Genetic variation in isozyme groups of *Phytophthora cinnamomi*

Tommerup, I.C. (112) CSIRO Div. of Forestry, Private Bag, Wembley, WA 6014 Australia

Evaluation of *Banksia* species for response to *Phytophthora* infection

Tynan, K.M., Scott, E.S., and Sedgley, M. (11) Department of Crop Protection, The University of Adelaide, Waite Campus, Glen Osmond, SA 5064 Australia

***Phytophthora* dieback of *Banksia* - Study of host pathogen interactions**

Tynan, K.M., Scott, E.S., and Sedgley, M. (108) Department of Crop Protection, The University of Adelaide, Waite Campus, Glen Osmond, SA 5064 Australia

Genetic variation of *Phytophthora cinnamomi* using RAPD and RFLP analysis

Wiechel, T. Smith, L.W., and Lawrie, A.C. (110) Department of Applied Biology and Biotechnology, Royal Melbourne Institute of Technology, Melbourne, VIC 3001 Australia

Virus Diseases

Some characteristics of a pathotype 4 isolate of pea seed-borne mosaic virus from South Australia

Ali, A., and Randles, J.W. (159) Department of Crop Protection, The University of Adelaide, Glen Osmond, SA 5064 Australia

Characterisation of Cucumber Mosaic Virus RNA 5 and its use in genetically engineered virus resistance

Blanchard, C.L., Boyce, P.M., and Anderson, B.J. (14) CSIRO, Division of Plant Industry, PO Box 1600, Canberra City, ACT 2601 Australia

Variation between isolates of sugarcane bacilliform virus

Braithwaite, K., Gambley, C., Egeskov, N., and Smith, G. (66) David North Plant Research Centre, BSES, PO Box 86, Indooroopilly, QLD 4068 Australia

Studies on the etiology of sugarcane striate mosaic disease

Choi, Y.G., and Randles, J.W. (161) Department of Crop Protection, Waite Agricultural Research Institute, The University of Adelaide, Glen Osmond, SA 5064 Australia

Influence of phytohormones on the replication of white clover mosaic virus (WCIMV) in *Phaseolus vulgaris*

Clarke, S.F., Guy, P.L., and Jameson, P.E. (163) University of Otago, Botany Dept, PO Box 56, Dunedin, New Zealand

PCR protocols for potato spindle tuber and chrysanthemum stunt viroids

Constable, F., Davidson, A., Gillings, M., and Moran, J. (167) Institute for Horticultural Development, Agriculture Victoria, SEMC, VIC 3176 Australia

PCR protocols for La France disease of mushrooms

Giles, R., Johansen, G., Revill, R., and Moran, J. (166) Institute for Horticultural Development, Agriculture Victoria, SEMC, VIC 3176 Australia

Viruses of cocksfoot in New Zealand

Guy, P.L., Campbell, A.W., Smales, T., and Ferguson, C.M. (16) University of Otago, Botany Department, PO Box 56, Dunedin, New Zealand

Ryegrass mosaic virus in New Zealand

Guy, P.L., Webster, D.E., and Forster, R.L.S. (13) University of Otago, Botany Department, PO Box 56, Dunedin, New Zealand

Variation in the coat protein coding region of sugarcane mosaic virus

Handley, J.A., Smith, G.R., Harding, R.M., and Dale, J.L. (162) Centre for Molecular Biotechnology, QUT, George St, Brisbane, QLD 4001 Australia

Dependent transmission of plant viruses by aphids

Johnstone, G.R., and Srithongchai, W. (18) Department of Primary Industry, Newtown, TAS 7008 Australia

Some properties of the cytoplasmic inclusion protein of ryegrass mosaic potyvirus

Lister, R.A., Eagles, R.M., Guy, P.L., and Forster, R.L.S. (164) Botany Department, University of Otago, PO Box 56, Dunedin, New Zealand

Tomato spotted wilt virus in Australia

Moran, J., Jones, R., Latham, L., Tesoriero, L., and Wilson, C. (19) Institute for Horticultural Development, Agriculture Victoria, SEMC, VIC 3176 Australia

RT-PCR amplification of RNA from sugarcane with yellow leaf syndrome using luteovirus group-specific primers

Smith, G.R., Fraser, T.A., Braithwaite, K.S., and Harding, R.M. (160) David North Plant Research Centre, BSES, PO Box 86, Indooroopilly, QLD 4068 Australia

Expression and purification of recombinant sugarcane mosaic virus coat protein

Smith, G.R., Ford, R., Bryant, J.D., Gambley, R.L., McGhie, T.K., Harding, R.M., and Dale, J.L. (15) David North Plant Research Centre, BSES, PO Box 86, Indooroopilly, QLD 4068 Australia

A Badnavirus from pineapple in Australia

Thomson, K.G., Horlock, C.M., Dietzgen, R.G., Thomas, J.E., and Teakle, D.S. (17) DPI, Queensland Agricultural Biotechnology Centre, The University of Queensland, QLD 4072 Australia

Effect of reflective mulching on the control of virus vectors in iris and tulip

Wilson, C., and Stroman, M. (165) Department of Agricultural Science, University of Tasmania, GPO Box 252C, Hobart, TAS 7001 Australia

Fruit and Vine Pathology

Downy mildew (*Peronospora rubi*) in micropropagated *Rubus* cane fruits

Breese, W.A., Williamson, B., and Shattock, R.C. (170) School of Biological Sciences, University College of North Wales, Bangor, Gwynedd LL57 2UW United Kingdom

Frequency and characteristics of dicarboximide resistant *Botrytis cinerea* strains in Western Cape table grape vineyards

Fourie, P.H., and Holz, G. (20) Department of Plant Pathology, University of Stellenbosch, Stellenbosch 7600 South Africa

A PCR-based method for the rapid identification of benomyl resistant strains of *Botrytis cinerea*

Luck, J.E., and Gillings, M.R. (23) Biological & Chemical Research Institute, NSW Agriculture, PMB 10, Rydalmere, NSW 2116 Australia

Population dynamics of fungicide resistant strains of *Botrytis cinerea* in New Zealand kiwifruit orchards

Manning, M.A., Pak, H.A., and Pennycook, S.R. (22) HortResearch, Private Bag, Auckland, New Zealand

Characterisation of the phytoplasma associated with Australian grapevine yellows

Padovan, A.C., Gibb, K.S., Magarey, P.A., and Wachtel, M.F. (24) Northern Territory University, Faculty of Science, Darwin, NT 0909 Australia

Surveys of fungicide resistance in *Botrytis cinerea* populations in New Zealand kiwifruit orchards

Pak, H.A., Manning, M.A., and Pennycook, S.R. (21) HortResearch, Private Bag, Auckland, New Zealand

Alternatives to soil disinfestation with methyl bromide in the strawberry runner and fruit industry

Porter, I.J., Feruglio, S.E. and Merriman, P.R. (171a) Institute for Horticultural Development, Agriculture Victoria, Private Bag 15, SEMC, VIC 3176 Australia

Detection of phytoplasmas associated with declining pears in southern Australia

Schneider, B., and Gibb, K. (25) Faculty of Science, Northern Territory University, Darwin, NT 0909 Australia

Bacterial endophytes of *Vitis vinifera* cv. Semillon

Stephens, P.M., and Davoren, C.W. (168) Cooperative Research Centre for Soil & Land Management, PMB 2, Glen Osmond, SA 5064 Australia

Evaluation of a monoclonal antibody for identification of the kiwifruit bacterial pathogen *Pseudomonas viridiflava*

Voyle, M.D., Gouk, S.C., and Bedford, R.J. (26) HortResearch, Ruakura Research Centre, Private Bag 3123, Hamilton, New Zealand

Postharvest treatment of kiwifruit to control *Botrytis* rot

Whitmore, K.R., Poole, P.R., and Ward, B.G. (171) Hort Research, Ruakura Research Centre, Private Bag 3123, Hamilton, New Zealand

The effect of curing on kiwifruit chitinases

Wurms, K., Long, P., Greenwood, D., Ganesh, S., and Sharrock, K. (169) Dept of Plant Science, Massey University, Private Bag 11222, Palmerston North, New Zealand

Fungal Taxonomy and Evolution

A comparison of virulence and genetic markers in *Colletotrichum gloeosporioides* on *Stylosanthes* spp.
Chakraborty, S., Perrott, R., Thomas, M., and Kuhnert, P. (179) Cooperative Research Centre for Tropical Plant Pathology, The University of Queensland, QLD 4072 Australia

Evolutionary relationships among *Phytophthora* species deduced from rDNA sequence analysis

Crawford, A.R., Bassam, B.J., Drenth, A., Maclean, D.J., and Irwin, J.A.G. (34) Cooperative Research Centre for Tropical Plant Pathology, The University of Queensland, QLD 4072 Australia

Transformation of *Trichoderma koningii* so it can be tracked on wheat roots

Dyer, S.K., Harvey, P., Ophel-Keller, K., Smith, S.E., and Sivasithamparam, K. (183) CSIRO, Division of Soils, Waite Campus, Glen Osmond, SA 5064 Australia

Vegetative incompatibility in cucurbit strains of *Fusarium solani* (*Nectria haematococca*)

Hawthorne, B.T., and ReesGeorge, J. (177) Molecular Genetics Group, HortResearch, Auckland, New Zealand

Characterisation of the *Colletotrichum* species causing dieback of *Lupinus arboreus* (tree lupin) in New Zealand

Howarth, A.F., Johnston, P.R., Pearson, M.N., and Dick, M. (36) School of Biological Sciences, University of Auckland, Auckland, New Zealand

rDNA sequence in relation to *Colletotrichum* taxonomy

Johnston, P.R., Jones, D. and Beever, R.E. (180) Manaaki Whenua - Landcare Research, Mt Albert, Auckland, New Zealand

Vegetatively compatible populations within *R. solani* AG-8

MacNish, G.C., and Carling, D.E. (38) Department of Agriculture, Esperance, WA 6450 Australia

The rust fungi of New Zealand

McKenzie, E.H.C. (39) Manaaki Whenua - Landcare Research, Private Bag 92170, Auckland, New Zealand

Reproducibility of RAPD analysis: Ideality vs Reality

Odongo, J., Godwin, I., and Aitken, E. (37) CRC for Tropical Plant Pathology, John Hines Building, The University of Queensland, QLD 4072 Australia

Mycelial incompatibility in *Botrytis cinerea*

Parkes, S.L., and Beever, R.E. (176) Manaaki Whenua - Landcare Research, Private Bag 92170, Auckland, New Zealand

Revision of Erysiphales (powdery mildew fungi) in Australia, and reassessment of the classification of anamorphic mildews

Pascoe, I., and Sivapalan, A. (40) Institute for Horticultural Development, SEMC, VIC 3176 Australia

Major chromosomal rearrangements occur during meiosis in the Ascomycetous fungus, *Leptosphaeria maculans*

Plummer, K., and Howlett, B. (35) Hort+Research Mt Albert Research Centre, Private Bag 92169, Auckland, New Zealand

The role of secreted aspartic proteinase in the pathogenicity of *Glomerellacingulata*

Plummer, K., Jack, S., Sullivan, P., Rikkerink, E.H.A., and Templeton, M.D. (184) Horticulture and Food Research Institute of New Zealand Ltd, Mt Albert Research Centre, Private Bag 92169, Auckland, New Zealand

Characterisation of *Fusarium avenaceum* subsp. *aywerti* and *Fusarium avenaceum* subsp. *nurrugi*

Sangalang, A.E., Summerell, B.A., Burgess, L.W., and Backhouse, D. (182) Fusarium Research Laboratory, Department of Crop Science, The University of Sydney, NSW 2006 Australia

Characterisation of *Fusarium babinda*

Summerell, B.A., Rugg, C.A., and Burgess, L.W. (181) Royal Botanic Gardens, Mrs Macquaries Rd, Sydney, NSW 2000 Australia

The pectin lyase B from *Glomerella cingulata* has high homology to *Trichoderma reesei* cellulases

Templeton, M.D., Lee, R.H., Crowhurst, R.N., Plummer, K.M., and Rikkerink, E.H.A. (185) The Horticulture and Food Research Institute of New Zealand Ltd., Mt Albert Research Centre, Auckland, New Zealand

New genetic markers for *Botrytis cinerea*

Weeds, P.L., Beever, R.E., and Long, P.G. (178) Plant Science Dept, Massey University, Palmerston North, New Zealand

Field and Flower Crops

Detection of fumonisins in Australian maize and toxigenicity of Australian cultures of *Fusarium* section *Liseola*

Burgess, L.W., Bryden, W.L., Salahifar, H., and Van Wel, P.W. (42) Department of Crop Sciences, The University of Sydney, NSW 2006 Australia

Bacterial blight in coriander

Dennis, J., Gooden, J., Ramsey, M., and Hayward, C. (41) SARDI, GPO Box 397, Adelaide, SA 5001 Australia

Field monitoring of tomato viruses in Gisborne, New Zealand

Fletcher, J.D., Herman, T.J.B., Cameron, P.J. (188) New Zealand Institute for Crop & Food Research, Lincoln, New Zealand

A survey of mosaic viruses in buttercup squash 1994-5

Fletcher, J.D., and Jermyn W.F. (189) New Zealand Institute for Crop & Food Research, Lincoln, New Zealand

Regulation of water relations for the post harvest control of *Botrytis* on cut flowers

Joyce, D., Wearing, A., Taylor, M., and Alam, S. (43) CSIRO Division of Horticulture, 306 Carmody Road, St Lucia, QLD 4067 Australia

The cause of petal spot in calla lilies (*Zantedeschia* sp.)

Knight, K.W.L., Braithwaite, M., Herber, R., and Saville, D.J. (45) New Zealand Plant Protection Centre, MAF Quality Management, PO Box 24, Lincoln, New Zealand

Phylogenetic classification of *Phormium* yellow leaf phytoplasma (MLO) by sequence analysis

Liefting, L., Andersen, M., Gardner, R., and Forster, R. (46) Horticulture and Food Research Institute of NZ Ltd, Mt Albert Research Centre, Auckland, New Zealand

Orchid diseases in Queensland

Ogle, H.J., Gowanlock, D.H., and Ferguson, J. (47) Department of Agriculture, The University of Queensland, QLD 4072 Australia

Pathogenic fungi associated with bud death of pyrethrum

Pethybridge, S., and Wilson, C. (186) Department of Agricultural Science, University of Tasmania, GPO Box 252C, Hobart, TAS 7001 Australia

Detection of a potyvirus of tuberose in Australia

Price, T.V., Thammachart, O., Kumar, C.A., Guy, G.L., and Splittstoesser, W.E. (187) School of Agriculture, La Trobe University, Bundoora, VIC 3083 Australia

Penetration and invasion of hypocotyl tissue of *Curcubita maxima* D. 'Crown' seedlings by *F. solani*

ReesGeorge, J., and Hawthorne, B.T. (191) Molecular Genetics Group, HortResearch, Auckland, New Zealand

***Pseudomonas syringae* pv. *syringae* causes wart-like eruptions on fruit of buttercup squash (*Cucurbita maxima*)**

Sharrock, K.R., Hawthorne, B.T., and Young, J.M. (190) HortResearch, Private Bag 92169, Auckland, New Zealand

Influence of fungi and environmental conditions on flower abscission in harvested Geraldton wax-flower

Taylor, M., Joyce, D., Wearing, A., and Simons, D. (44) Department of Plant Production, The University of Queensland, Gatton College, Lawes, QLD 4343 Australia

Vegetables

An investigation of potato black dot disease in Tasmania and its control

Aldaoud, R., Green, B., Macleod, I., and Aird, P. (49) Serve-Ag Pty. Ltd., PO Box 690, Devonport, TAS 7310 Australia

An investigation of the epidemiology and control of *Ascochyta* diseases of peas in Tasmania

Aldaoud, R., Macleod, I., Green, B., and Nielsen, P. (48) Serve-Ag Pty. Ltd., PO Box 690, Devonport, TAS 7310 Australia

***Rhizoctonia* disease of potato in South Australia**

Balali, G.R., Neate, S.M., Scott, E.S., Whisson, D.L. and Wicks, T.J. (197) Department of Crop Protection, The University of Adelaide, Waite Campus, Glen Osmond 5064 Australia

Effects of tuber and in-furrow chemical treatments on powdery scab control on potatoes

Braithwaite, M., Nott, H.M., Genet, R.A., Fletcher, J.D., Falloon, R.E., Wallace, A.R., and Braam, W.F. (50) New Zealand Plant Protection Centre, PO Box 24, Lincoln, New Zealand

Detection of benzimidazole resistance in isolates of *Monilochaetes infuscans* (Scurf) from Kumara in Northland

Broadhurst, P.G. (198) New Zealand Institute for Crop & Food Research Limited, Private Bag 92169, Auckland, New Zealand

Detection of Powdery scab (*Spongospora subterranea*) from potato tubers with PCR based detection systems

Bulman, S., and Marshall, J. (200) Crop & Food Research, Private Bag 4704, Christchurch, New Zealand

A screening technique for evaluating potential biological control agents of clubroot in cauliflower

Cheah, L.H., and Marshall, A.P. (54) Crop & Food Research, Private Bag 4005, Levin, New Zealand

Spatial dynamics of dark leaf spot of chinese cabbage

Chen, L.Y., and Price, T.V. (199) School of Agriculture, La Trobe University, Bundoora, VIC 3083 Australia

An epidemic of bacterial blight in Australian peas

Gooden J., and Rishworth J. (203) SARDI, GPO Box 397, Adelaide, SA 5001 Australia

***Verticillium biguttatum* in South Australia**

Hall, B., Morgan, B., and Thrum, R. (196) SARDI, GPO Box 397, Adelaide, SA 5001 Australia

Asparagus Virus 2: Incidence in New Zealand and effect on yield

Jaspers, M.V. (53) Department of Plant Science, PO Box 84, Lincoln University, Lincoln, New Zealand

***Fusarium* dry rot in potatoes and its control in Tasmania**

Liyanage, A., Aldaoud, R., Macleod, I., Green, B., Beattie, B., and Murdoch, L. (202) D.P.I.F, PO Box 303, Devonport, TAS 7310 Australia

Effects of three isolates of SPFMV on yield and quality of sweet potatoes

Pan, G., Wearing, A., Jackson, K., and Persley, D. (52) Department of Plant Production, The University of Queensland, Gatton College, Lawes, QLD 4343 Australia

The effect of four pathogens of potato on dry matter production

Shah, F.A., Gaunt, R.E., Stewart, A., and Marshall, J.W. (201) Department of Plant Science, PO Box 84, Lincoln University, Lincoln, New Zealand

Control of *Aphanomyces euteiches* pea root rot by composts

Walter, M., Frampton, C., and McKenzie, E. (204) Hort Research, PO Box 51, Lincoln, New Zealand

Chemical and biological control of *Rhizoctonia solani* on potato seed tubers

Wicks, T.J., Morgan, B., and Hall, B. (192) SARDI, GPO Box 397, Adelaide, SA 5001 Australia

In vitro evaluation of Indian mustard as a control for *Rhizoctonia solani* on potatoes

Wicks, T.J., Morgan, B., and Hall, B. (193) SARDI, GPO Box 397, Adelaide, SA 5001 Australia

Phosphonic acid fails to control powdery scab and black scurf of potatoes

Wicks, T.J., and Hall, B. (194) SARDI, GPO Box 397, Adelaide, SA 5001 Australia

Integrated management of early and late potato blights

Wicks, T.J., Liyanage, A., Hall, B., Catsipordas, A., and Palmer, C. (195) SARDI, GPO Box 397, Adelaide, SA 5001 Australia

Control of *Rhizoctonia solani* on potatoes with tuber seed treatments and soil fumigation

Wicks, T.J., Morgan, B., and Hall, B. (51) SARDI, GPO Box 397, Adelaide, SA 5001 Australia

Plant Disease Management

Climatic analysis of the distribution of soil fungi and soilborne diseases

Backhouse, D., and Burgess, L.W. (136) Department of Crop Sciences, The University of Sydney, NSW 2006 Australia

Field testing of an infection model for targeting sprays to manage *Botrytis* bunch rot of grapes

Balasubramaniam, R., Foley, L., Moore, T., and Kloosterman, P. (117) HortResearch, Marlborough Research Centre, Private Bag 1007, Blenheim, New Zealand

Preliminary survey of the distribution of phytoplasma associated with Australian grapevine yellows

Bonfiglioli, R.G., Schliefert, L.K., Gibson, R.J., Magarey, P.A., Wachtel, M.F., Gibb, K.S., and Symons, R.H. (118) University of Adelaide, Glen Osmond, SA 5064 Australia

Effect of temperature, duration of leaf wetness and inoculum concentration on the severity of *ascochyta* blight in field peas cv. Dundale

Bretag, T.W. (137) Victorian Institute for Dryland Agriculture, Agriculture Victoria, Private Bag 260, Horsham, VIC 3401 Australia

Ecological zonation of plant diseases and its application in pest risk analysis

Chandrashekar, M. (140) Bureau of Resource Sciences, PO Box E11, Queen Victoria Terrace, Parkes, ACT 2601 Australia

Evaluation of new and existing methods for clubroot control in Australia

Cross, S., Porter, I., Floyd, R., and Galati, A. (249) Institute for Horticultural Development, Agriculture Victoria, SEMC, VIC 3176 Australia

A disease warning program for control of *Botrytis* bunch rot of table grapes

De Kock, P.J., and Potgieter, T.R. (255) Agricultural Research Council, Nietvoorbij Institute for Viticulture and Oenology (Nietvoorbij), Private Bag X5026, 7599 Stellenbosch, Republic of South Africa

A comparison of the field disease cycle of *Puccinia menthae* on Todd Mitcham peppermint and on Scotch spearmint

Edwards, J., Parbery, D.G., Halloran, G.M., and Pang, E. (139) Department of Agriculture, The University of Melbourne, Parkville, VIC 3052 Australia

Effect of grapevine canopy management practices on the development of foliage diseases

Emmett, R.W., Clingeffer, P.R., Wicks, T.J., Hall, B.H., Hart, K.M., Sommer, K., and Clarke, K. (277) Agriculture Victoria, Mildura, VIC 3502 Australia

Reduction of the impact of grapevine powdery mildew in Australian viticulture

Emmett, R.W., Magarey, P.A., Clarke, K., Biggins, L.T., Wachtel, M.F., Wicks, T.J., Minnis, J.T., and Wilkins, B.J. (276) Agriculture Victoria, Mildura, VIC 3502 Australia

Managing the foliage diseases of grapevines in Australia

Emmett, R.W., Magarey, P.A., Wicks, T.J., Nair, N.G., and Wachtel, M.F. (119) Agriculture Victoria, Mildura, VIC 3502 Australia

Applications of a computer model for predicting blossom infections by fire blight

Gouk, S.C., Bedford, R.J., and Hutchings, S.O. (114) HortResearch, Ruakura Research Centre, Hamilton, New Zealand

Progress in phosphonate research

Guest, D. (64) School of Botany, The University of Melbourne, Parkville VIC 3052 Australia

PCR-based techniques for detection of *Erwinia amylovora*

Guildford, P., Clark, R.G., Taylor, R.K., Hale, C.N., and Forster, R.L.S. (251) The Horticulture and Food Research Institute of New Zealand Ltd, Mt Albert Research Centre, Private Bag 92169, Auckland, New Zealand

Ecology and epidemiology of fire blight in New Zealand

Hale, C.N., Taylor, R.K., and Clark, R.G. (113) The Horticulture and Food Research Institute of New Zealand Ltd, Mt Albert Research Centre, Private Bag 92169, Auckland, New Zealand

Management of viral diseases of tomato in Malakand, Pakistan

Hassan, S., Munting, A., and Ali, A. (279) Department of Plant Pathology, NWFP Agricultural University, Peshawar, Pakistan

Sensor effects in the calculation of infection periods

Henshall, W.R., Spink, M., and Beresford, R.M. (253)

HortResearch, Private Bag 92169, Auckland, New Zealand

The basic reproductive rate: a unifying parameter for plant disease management

Jeger, M.J. (62) Department of Phytopathology, Agricultural University, Wageningen, The Netherlands.

Forecasting *Alternaria brassicae* and *Mycosphaerella brassicicola* in vegetable brassicas

Kennedy, R., Graham, A.M., and Cullington, J.E. (115) Horticulture Research International, Wellesbourne, Warwick, United Kingdom

Assessment of the enhanced greenhouse effect on plant diseases – A case study of *Stylosanthes anthracnose*

Lupton, J., Chakraborty, S., Dale, M., and Sutherst, R. (252) CRC for Tropical Plant Pathology, The University of Queensland, QLD 4072 Australia

Development of commercial control strategies for white rot of onions in Tasmania

Macleod, I. (138) Serve-Ag Pty. Ltd., PO Box 690, Devonport, TAS 7310 Australia

A low cost weather station/predictor for grapevine downy mildew and other diseases: Development underway

Magarey, P.A., Western, M.D., and Seem, R.C. (278) Loxton Centre, PISA, Loxton, SA 5333 Australia

Epidemiology of hop red root rot and strategies for control

Maher, P.A., Porter, I.J., Lawrie, A.C., and Leggett, G. (141) RMIT, Melbourne, VIC 3001 Australia

Control of downy mildew in *Brassica* seedlings

Minchinton, E., Mebalds, M., Pascoe, I., and Pierce, P. (250) Department of Agriculture, SEMC, VIC 3176 Australia

Microclimate variation within apple tree canopies and between sites in relation to *Venturia inaequalis* infection

Penrose, L.J., and Nicol, H.I. (257) Agricultural Research & Veterinary Centre, NSW Agriculture, Forest Road, Orange, NSW 2800 Australia

PESTDECIDE – A decision support system for accreditation of apples produced with a reasoned pesticide program

Penrose, L.J., Thwaite, W.G., Maguire, M., and Morris, K. (256) Agricultural Research & Veterinary Centre, NSW Agriculture, Forest Road, Orange, NSW 2800 Australia

Infection period-responsive spraying for disease management in Hawke's Bay, New Zealand

Tate, K.G., Wood, P.N., and Manktelow, D.W. (116) HortResearch, Hawke's Bay Research Centre, Hastings, New Zealand

Quantitative assessment of disease severity using digital image processing

Tucker, C.C., Chakraborty, S., Kong, G.A., and Kochman, J.K. (254) CRC for Tropical Plant Pathology, The University of Queensland, Brisbane, QLD 4072 Australia

Evaluation of the contribution of farming systems studies to plant disease management

Van Bruggen, A.H.C. (63) University of California, Davis, CA, United States of America

Development of a regional forecasting system for lettuce downy mildew

Van Bruggen, A.H.C., Scherm, H.W., Pennings, G.G. (142) Dept of Plant Pathology, University of California, Davis, CA, United States of America

Epidemiology and control of pear scab

Washington, W.S., and Villalta, O.N. (280) Institute for Horticultural Development, Agriculture Victoria, SEMC, VIC 3176 Australia

Genetic Variation in Pathogens

Genetic variation in AG-3 isolates of *Rhizoctonia solani* causing potato disease in South Australia

Balali, G.R., Scott, E.S., Whisson, D.L., and Neate, S.M. (210) Department of Crop Protection, The University of Adelaide, Waite Campus, Glen Osmond, SA 5064 Australia

Enzyme-linked immunoassay for comparing populations of *Clavibacter xyli* subsp. *xyli* in cultivars of sugarcane

Croft, B.J., and Greet, A.D. (61) Bureau of Sugar Experiment Stations, PO Box 566, Tully QLD 4854 Australia

Detection and strain differentiation of plant pathogenic phytoplasmas in Australia

Davis, R., Padovan, A., Gibb, K., and Schneider, B. (209) Faculty of Science, Northern Territory University, Darwin, NT 0909 Australia

***Sclerotinia sclerotiorum* populations affecting sunflower fields in South East Queensland**

Ekins, M.G., Goulter, K.C., Kohn, L.M., and Aitken, E.A. (67) Cooperative Research Centre for Tropical Plant Pathology, The University of Queensland, QLD 4072 Australia

Characterization of *Uncinula necator*, the grapevine powdery mildew fungus

Evans, K.J., Whisson, D.L. and Scott, E.S. (69) Cooperative Research Centre for Viticulture, Dept of Crop Protection, The University of Adelaide, Waite Campus, Glen Osmond, SA 5064 Australia

Genotypic diversity among Australian and overseas isolates of *Puccinia helianthi*

Engel, B.C., Aitken, E.A., Drenth, A., Goulter, K.C., Gulya, T., Kochman, J.K., and Kong, G.A. (211) Cooperative Research Centre for Tropical Plant Pathology, The University of Queensland, QLD 4072 Australia

Genotypic diversity among Australian isolates of *Macrophomina phaseolina*

Fuhlbohm, M.J., Aitken, E.A., and Ryley, M.J. (68) Cooperative Research Centre for Tropical Plant Pathology, The University of Queensland, QLD 4072 Australia

Population genetics studies of *Mycosphaerella* spp. infecting bananas

Hayden, H.L., Pegg, K.G., Aitken, E.A., and Irwin, J.A.G. (65) Cooperative Research Centre for Tropical Plant Pathology, The University of Queensland, QLD 4072 Australia

Identification of potato cyst nematode pathotypes by high performance capillary electrophoresis

Hinch, J., Alberdi, F., Woodward, J., Smith, S., and Evans, K. (71) Plant Sciences & Biotechnology, La Trobe University, Bundoora, VIC 3083 Australia

Pathogenicity studies and interaction between different pathotypes of *Leptosphaeria maculans*

Lindbeck, K.D., Ash, G.J., Luckett, D., and Wratten, N. (214) Charles Sturt University - Riverina, Wagga Wagga, NSW 2678 Australia

Genetic diversity in *Phomopsis viticola* in Australian vineyards

Scheper, R.W.A., Scott, E.S., and Whisson, D.L. (212) Cooperative Research Centre for Viticulture, Department of Crop Protection, The University of Adelaide, Waite Campus, Glen Osmond, SA 5064 Australia

Variation and stability of virulence in isolates of *Diaporthe toxica*

Shankar, M., Cowling, W.A., and Sweetingham, M.W. (213) Department of Agriculture, South Perth, WA 6151 Australia

Diagnosis of *Burkholderia (Pseudomonas) solanacearum* and related bacteria with specific primers and polymerase chain reaction

Taghavi, M., Fegan, M., Sly, L.I. and Hayward, A.C. (70) Cooperative Research Centre for Tropical Plant Pathology, The University of Queensland, QLD 4072 Australia

Chemical Control

Synertrol Grape: A soft fungicide for powdery mildew (*Uncinula necator*) of grapevine

Azam, M.G.N., Gurr, G.M., and Magarey, P.A. (219) Orange Agricultural College, The University of Sydney, Orange, NSW 2800 Australia

Chemical control of major root diseases of tobacco

Azmi, A.R. (222) Malaysian Agricultural Research & Development Institute (MARDI), Tobacco Research Center MARDI Telong, 16300 Bachok, Kelantan, Malaysia

Calcium cyanamide and soil solarization for the control of *Fusarium solani* f.sp. *cucurbitae* in greenhouse cucumber

Bourbos, V.A., Skoudridakis, M.T., Darakis, G., and Koulikakis, M. (221) National Agricultural Research Foundation, Subtropical Plants and Olive Trees Institute of Chania, Agrokippio, 73100, Chania, Crete, Greece

Calcium cyanamide (CaN₂) for clubroot control in cauliflower

Cheah, L.H. (220) Crop & Food Research, Private Bag 4005, Levin, New Zealand

Persistence of pesticide residues in grapes, dried fruit and wine

MacGregor, A., Wicks, T., Campbell, K., Buchanan, G., Ruediger, G., Roberts, G., Hawtin, J., Franz, P., and Johnstone, R. (215) Agriculture Victoria, Sunraysia Horticultural Centre, Irymple, VIC 3502 Australia

Control of vascular streak dieback of cocoa using trunk-injected fungicides

Kalc Wright, G.F., Guest, D.I., and Middleton, R.M. (76) School of Botany, The University of Melbourne, Bundoora, VIC 3052 Australia

Control of silverleaf disease on peaches and apricots by stem injection with fungicides

Lim, T.M. (216) Institute for Sustainable Irrigated Agriculture, Tatura Centre, Tatura, VIC 3616 Australia

Baking soda and additives for control of powdery mildews

Long, P.G., Weeds, P., Wood, P., Tate, G., and Bayler, C. (73) Department of Plant Science, Massey University, Palmerston North, New Zealand

Control of foliar diseases of wheat with reduced rate single applications of Triazole fungicides

Loughman, R. (72) Department of Agriculture, South Perth, WA 6151 Australia

Chemical prevention of leaf rust disease in wheat

Owen, K.J. (217) Department of Crop Sciences, The University of Sydney, NSW 2006 Australia

Effect of early season fungicides on resistance dynamics of *Botrytis cinerea* populations in New Zealand kiwifruit orchards

Pak, H.A., Manning, M.A., and Pennycook, S.R. (78) HortResearch, Private Bag, Auckland, New Zealand

Alternatives to soil disinfestation with methyl bromide for control of Sclerotium rot of flower bulbs

Porter, I.J., Feruglio, S.E., and Gross, R.W. (75) Institute for Horticultural Development, Agriculture Victoria, SEMC, VIC 3176 Australia

Oils – New soft fungicides for grape powdery mildew (*Uncinula necator*)?

Wicks, T., McLachlan, D., Campbell, K., Biggins, L., Magarey, P., and Emmett, B. (218) SARDI, GPO Box 397, Adelaide, SA 5001 Australia

SCALA, a new *Botrytis* fungicide

Winter, E.H., and Smith, B.N. (223) AgrEvo Pty Ltd, 1731-1733 Malvern Road, Glen Iris, VIC 3146 Australia

Commercial adoption of hydrated lime for apple scab control in Australia

Wong, J.A.L., Archer, C., Schupp, P., Williams, W.G., and O'Loughlin, J. (77) Tasmanian Institute of Agricultural Research, Department of Primary Industry and Fisheries, St. Johns Avenue, New Town, TAS 7008 Australia

Control of grape powdery mildew (*Uncinula necator*) with foliar sprays of soft fungicides

Wood, P., Tate, G., Long, P., and Bayler, C. (74) Hort Research, Hawke's Bay Research Centre, Hastings, New Zealand

Inoculum

Ascospores as primary inoculum of *Phaeosphaeria* spp. in Western Australia

Bathgate, J.A., and Loughman, R. (224) Department of Agriculture, South Perth, WA 6151 Australia

Ecology of *Colletotrichum acutatum* on the phylloplane of strawberry plants

Bransgrove, K., and Dale, M. (83) CRC for Tropical Plant Pathology, The University of Queensland, QLD 4072 Australia

Using potter tower to inoculate tomato stems with *Botrytis cinerea*

Cook, D.W.M., and Long, P.G. (226) Dept of Plant Science, Massey University, Private Bag 11222, Palmerston North, New Zealand

Sanitation by removal of berries with visual symptoms of *Botrytis cinerea* from table grape bunches as a control measure against pre and postharvest decay

Fourie, J.F. (80) Unifruco Research Services, Box 1231, Stellenbosch 7599, South Africa

A commercial test for bacterial blight in peas

Gooden, J., and Alberts, E. (85) SARDI, GPO Box 397, Adelaide, SA 50001 Australia

Survival of *Pseudomonas syringae* pv. *pisi* on pea trash and its effect on a following pea crop

Holloway, G.J., and Bretag, T.W. (84) Agriculture Victoria, Victorian Institute for Dryland Agriculture, Private Bag 260, Horsham, VIC 3401 Australia

Behaviour of *Botrytis cinerea* on grape, nectarine and plum fruit surfaces under different wetness regimes

Holz, G., Körte, V., and Coertze, S. (82) Department of Plant Pathology, University of Stellenbosch, Stellenbosch 7600, South Africa

Levels of airborne *Botrytis cinerea* spores in two kiwifruit orchards situated in the Bay of Plenty, New Zealand

Hoyte, S.M., Perry-Meyer, L.J., Hill, R.A., and Dow, B.W. (81) HortResearch, Ruakura Research Centre, Private Bag 3123, Hamilton, New Zealand

The infection of wheat by *Didymella exitialis*

Mace, M.A., Cromey, M.G., and Cole, A.J. (225) Dept of Plant & Microbial Sciences, University of Canterbury, New Zealand

***Botrytis cinerea* inoculum on kiwifruit necrotic leaves and fruit in relation to the incidence of *Botrytis* storage rots**

Pennycook, S.R., Pak, H.A., and Manning, M.A. (79) HortResearch, Private Bag, Auckland, New Zealand

Effect of high pH on germination and infection hypha formation of conidia of *Venturia inaequalis*

Pung, S.H., Wong, J.A.L., Say, M., and Williams, W.G. (228) Tasmanian Institute of Agricultural Research, Department of Primary Industry and Fisheries, St. Johns Avenue, New Town, TAS 7008 Australia

Primary sources of fungal inoculum causing post-harvest diseases of longan (*Dimocarpus longan* Lour. Sapindaceae)

Sardsud, V., Sardsud, U., Sittigul, C., Chantrasri, P., and Prom-in, S. (229) Chiang mai University, Chiang mai, Thailand

Infection of broccoli by *Peronospora violae*

Smith, P.A. and Price, T.V. (227) School of Agriculture, La Trobe University, Bundoora, VIC 3083 Australia

Soilborne Diseases of Cereals

Assessing diversity in soil fungi

Backhouse, D., Burgess, L.W., Summerell, B.A., and Gott, K.P. (238) Department of Crop Sciences, The University of Sydney, NSW 2006 Australia

Control of crown rot of wheat by late stubble burning

Burgess, L.W., Backhouse, D., Swan, L., and Esdaile, R.J. (242) Department of Crop Sciences, The University of Sydney, NSW 2006 Australia

- Pseudomonas* bacterial colonization of wheat roots**
Groom, K.A.E., Goydych, W., and Nayudu, M. (230) Division of Botany & Zoology, Faculty of Science, Australian National University, Canberra, ACT 2600 Australia
- Pseudomonas* exopolysaccharides play an important role in bacterial biological control protection of the take-all fungus**
Groom, K.A.E., and Nayudu, M. (231) Division of Botany & Zoology, Faculty of Science, Australian National University, Canberra, ACT 2600 Australia
- Perpetuation of the fungus *Gaeumannomyces graminis* var. *triticion* crowns of pasture grasses**
Inwood, R.J., Roget, D.K., and Rovira, A.D. (86) CSIRO Division of Soils, Glen Osmond, SA 5064 Australia
- Biological control of the take-all disease of wheat by *Pseudomonas* bacteria**
Nayudu, M., Groom, K.A.E., Turnbull, K., Fernance, J., Murphy, T., Wong, P.T.W., and Ash, J. (87) Division of Botany & Zoology, Faculty of Science, Australian National University, Canberra, ACT 2600 Australia
- Bioluminescence (using luciferase or lux) a unique and cheap marker for detecting soil (*Pseudomonas*) bacteria**
Nayudu, M., Murphy, T., Wong, P.T.W., and Ash, J. (232) Division of Botany & Zoology, Faculty of Science, Australian National University, Canberra, ACT 2600 Australia
- Designing a specific PCR primer for identification of a *Pseudomonas* biological control bacteria**
Nayudu, M., and Tyler, B. (233) Division of Botany & Zoology, Faculty of Science, Australian National University, Canberra, ACT 2600 Australia
- Decline of root rot in wheat caused by *Rhizoctonia solani* AG-8**
Roget, D.K. (89) CSIRO Division of Soils, Glen Osmond, SA 5064 Australia
- Suppression of take-all of wheat by *Pseudomonas corrugata* strain 2140 by the production of water-soluble antibiotics**
Ross, I.L., and Ryder, M.H. (235) Cooperative Research Centre for Land and Soil Management, PMB 2, Glen Osmond, SA 5064 Australia
- Effect of temperature on competitive colonization of roots by five *Fusarium* species**
Saremi, H., Backhouse, D., and Burgess, L.W. (241) Fusarium Research Laboratory, Department of Crop Sciences, The University of Sydney, NSW 2006 Australia
- Ability of the lumbricid earthworm *Aporrectodea trapezoides* to reduce the disease severity of *Rhizoctonia* bare-patch and take-all and increase wheat grain yield in the field**
Stephens, P.M., and Davoren, C.W. (88) Cooperative Research Centre for Soil & Land Management, PMB 2, Glen Osmond, SA 5064 Australia
- Influence of soil moisture on progress of infection of wheat by *Fusarium graminearum* Group 1**
Swan, L., and Burgess, L.W. (240) Department of Crop Sciences, The University of Sydney, NSW 2006 Australia
- The precise role of antibiosis in *Pseudomonas* bacteria's biological control protection against the take-all fungus**
Turnbull, K., and Nayudu, M. (234) Division of Botany & Zoology, Faculty of Science, Australian National University, Canberra, ACT 2600 Australia
- Pathogenicity of root colonising *Fusarium* spp. against various pasture species**
Waipara, N.W. (236) (no address supplied)
- The effect of the herbicide Metsulfuron Methyl on cereal cyst nematode (*Heterodera avenae*) on wheat in two soil types**
Warren, R.A., Neate, S.M., and Rovira, A.D. (237) CSIRO Div. Soils & CRC for Soil and Land Management, Glen Osmond, SA 5064 Australia
- Molecular characterization and detection of *Rhizoctonia solani***
Whisson, D.L., Balali, G.R., and Yang, H. (91) SARDI, GPO Box 397, Adelaide, SA 50001 Australia
- Biological suppression of *Rhizoctonia* root rot of wheat**
Wiseman, B.M., Neate, S.M., Ophel-Keller, K., and Smith, S.E. (92) CSIRO Div. Soils & CRC for Soil and Land Management, Glen Osmond, SA 5064 Australia
- Control of wheat root diseases and seedling growth promotion by root associated bacteria**
Yan, Z., Ryder, M., Terrace, T., Rovira, A., and Tang, W. (239) CSIRO Division of Soils, Glen Osmond, SA 5064 Australia
- Mechanisms of virulence of *Rhizoctonia solani* AG8 strains**
Zamani, M.R., Tommerup, I., and O'Brien, P.A. (90) Biotechnology Programme, School of Biological and Environmental Sciences, Murdoch University, Murdoch WA 6150 Australia

Molecular Plant Pathology

Molecular distinction of *Pythium* species pathogenic to sugarcane

Bassam, B.J., Heelan, L.A., Pegg, G.S., Irwin, J.A.G., Maclean, D.J. (93) Cooperative Research Centre for Tropical Plant Pathology, The University of Queensland, QLD 4072 Australia

Genetic variation within *F. oxysporum* f.sp. *cubense* in banana analysed by DNA amplification fingerprinting

Bentley, S. (95) Cooperative Research Centre for Tropical Plant Pathology, John Hines Building, The University of Queensland, QLD 4072 Australia

Use of monoclonal antibodies for detection and quantification of fungal pathogens

Dewey, F.M., Priestley, R.A., and Thornton, C.R. (98) Department of Plant Sciences, University of Oxford, United Kingdom

Modern approaches to improving our understanding of host plant and nematode parasite interactions

Grundler, F.M.W. (97) Institut für Phytopathologie, Universität Kiel, Germany

Molecular markers and plant pathogen populations: What are the most interesting epidemiological questions?

Kohn, L.M. (96) Dept of Botany, University of Toronto, Erindale College, Mississauga, Ontario, Canada L5L 1C6

A genetic linkage map of *Phytophthora sojae* based on RAPD, RFLP and avirulence markers

Whisson, S.C., Drenth, A., Maclean, D.J., and Irwin, J.A.G. (94) Cooperative Research Centre for Tropical Plant Pathology, The University of Queensland, QLD 4072 Australia

Education and Extension

The impact of the CMV testing service

Alberts, E. (244) SARDI, GPO Box 397, Adelaide, SA 50001 Australia

Presentation skills for pathology students: Using video for self-assessment

Dale, M. (101) Cooperative Research Centre for Tropical Plant Pathology, The University of Queensland, QLD 4072 Australia

Australasian Plant Pathology - The official journal of Australasian Plant Pathology Society Inc.

Dodman, R.L. (243) Department of Primary Industries, PO Box 102, Toowoomba, QLD 4350 Australia

Operation of the Tasag Elisa and pathogen testing service

Johnstone, G.R., and Cross, P.A. (105) Department of Primary Industry, Hobart, 7000 TAS Australia

Net gains

Lawrie, A.C. (102) Dept of Applied Biology & Biotechnology, RMIT, GPO Box 2476V, Melbourne, VIC 3001 Australia

Orchard 2000 - Software for weather based disease management

Laurenson, M. (104) HortResearch, Batchelar Research Centre, Private Bag 11030, Palmerston North, New Zealand

Conveying disease control messages to Australian grapegrowers

Magarey, P.A., and Magarey, R.D. (103) PISA, Loxton, SA 5333 Australia

Supervision of PhD students in plant pathology in the Department of Crop Protection, University of Adelaide

Scott, E.S., Davies, K.A., Randles, J.W., and Murphy, P.J. (100) Department of Crop Protection, The University of Adelaide, Waite Campus, Glen Osmond, SA 5064 Australia

Plant pathology education at the University of Tasmania

Wilson, C.R., Mohammed, C.L., and Clark, R.J. (99) Department of Agricultural Science, University of Tasmania, GPO Box 252C, Hobart TAS 7001 Australia

Nematodes

Predation by *Allodorylaimus americanus* and *Discolaimus silvicolus* on plant parasitic nematodes

Bilgrami, A.L. (123) Department of Zoology, Aligash Muslim University, Aligash 202002 India

A new species of nematode-trapping fungus capturing nematodes with adhesive knobs and rings

Eden, L.M., Aitken, E.A.B., and Stirling, G.R. (125) Dept of Botany, Cooperative Research Centre for Tropical Plant Pathology, The University of Queensland, QLD 4072 Australia

Pathogenicity of stem nematode (*Ditylenchus dipsaci*) and development of screening techniques for use in lucerne (*Medicago sativa*) improvement in Australia

Georgaras, P.A., Pourbeik, T., and Auricht, G.C. (259) SARDI, GPO Box 397, Adelaide, SA 50001 Australia

Distribution of nematodes in white clover in Australia

McLeish, L., Berg, G., Hinch, J., Nambiar, L., and Norton, M. (258) Plant Sciences and Biotechnology, Agriculture Victoria, LaTrobe University, Bundoora, VIC 3083 Australia

Phytoparasitic nematodes of New Zealand pastures

Mercer, C.F. and Watson, R.N. (122) (no address supplied)

Field yield reductions caused by the root lesion nematode, *P. thornei* on wheat in South Australia

Nicol, J.M., Fisher, J.M., Hancock, T., and Davies, K.A. (121) The University of Adelaide, Waite Institute, Glen Osmond SA 5064 Australia

Interaction of the root lesion nematodes *Pratylenchus thornei* and *Pratylenchus neglectus* with the root rotting fungi, *Microdochium bolleyi* and *Fusarium acuminatum* on wheat

Nicol, J.M., Taheri, A.H., Davies, K.A., and Fisher, J.M. (120) The University of Adelaide, Waite Institute, Glen Osmond, SA 5064 Australia

***Dilophospora alopecuri* and biocontrol of the nematode and bacterium responsible for annual ryegrass toxicity**

Riley, I.T. (124) Plant Pathology, Department of Agriculture, South Perth, WA 6151 Australia

Biological Control of Pathogens and Weeds

Problems associated with the development of mycoherbicides

Auld, B. (127) NSW Agriculture, Agricultural Research & Veterinary Centre, Forest Road, Orange, NSW 2800 Australia

Studies on biocontrol of *Sclerotium rolfsii* and *Phytophthora* species

Chambers, S.M., Lampang, A.N., and Scott, E.S. (135) Department of Physiology, The University of Sydney, NSW 2006 Australia

Postharvest biological control of *Botrytis* storage rot of beans with yeasts

Cheah, L.H., and Marshall, A.P. (266) Crop & Food Research, Levin Research Centre, Private Bag 4005, Levin, New Zealand

Pathogenicity of *Phoma* sp. and *Phomopsis* sp. on saffron thistle (*Carthamus lanatus* L.)

Crump, N.S., Ash, G.J., and Nikandrow, A. (268) Charles Sturt University - School of Agriculture, Wagga Wagga, NSW 2678 Australia

The ecological and physiological basis for successful biocontrol of plant pathogens

Deacon, J. (128) Institute of Cell & Molecular Biology, University of Edinburgh, Scotland

The effect of *Rhynchosporium alismatis* on seed production of *Damasonium minus*

Fox, K.M., Ash, G.J., and Cother, E.J. (269) Charles Sturt University - Riverina, Wagga Wagga, NSW 2678 Australia

Control of *Botrytis cinerea* on table grape with *Trichosporon pullunans* isolated from grape berries

Holz, G., Schmidt, L. and Ferreira, J.H.S. (267) Department of Plant Pathology, University of Stellenbosch, Stellenbosch 7600, South Africa

***Sclerotinia sclerotiorum*, a potential mycoherbicide for *Ranunculus acris*, a perennial pasture weed in New Zealand**

Green, S., Field, R., Gaunt, R., Bourdot, G., and Harvey, I. (275) Department of Plant Science, PO Box 84, Lincoln University, New Zealand

Analysis of mycoviruses in the plant pathogenic fungus *Botrytis cinerea*

Howitt, R.L.J., Beaver, R.E., Pearson, M.N., and Forster, R.L.S. (260) School of Biological Sciences, University of Auckland, Private Bag 92019, Auckland, New Zealand

Protection against armillaria root rot of kiwifruit by injection with *Trichoderma*

Hunt, J.S., and Gale, D.S.J. (264) Agrimm Technologies Limited, PO Box 13-245, Christchurch, New Zealand

Control of dead arm disease in grapes with *Trichoderma*

Hunt, J.S., and Gale, D.S.J. (273) Agrimm Technologies Limited, PO Box 13-245, Christchurch, New Zealand

Fruit fly associated bacteria provide natural biocontrol

Johnson, G.I., Atkins, C.M., Teakle, D.S., and Hayward, A.C. (133) CSIRO Division of Horticulture, St Lucia, QLD 4067 Australia

Comparative behaviour of mycoparasitic *Pythium* species

Jones, E.E., and Deacon, J.W. (132) Institute of Cell & Molecular Biology, University of Edinburgh, Scotland

Biological control of onion white rot using fungal antagonists and soil solarisation

McLean, K., and Stewart, A. (263) Department of Plant Science, Lincoln University, PO Box 84, Canterbury, New Zealand

A mechanism of antagonism of *Sclerotium cepivorum* by *Trichoderma koningii* in onion roots

Metcalf, D.A., Wong, J.A.L., Wilson, C.R., and Cruickshank, R. (274) Department of Agricultural Science, University of Tasmania, GPO Box 252C, Hobart TAS 7001 Australia

Infection process of *Colletotrichum gloeosporioides* f. sp. *malvae* on Malvaceae weeds

Morin, L., Derby, J.L., and Kokko, E.G. (270) Agriculture and Agri-Food Canada, Research Station, Regina, Saskatchewan, Canada

Development of *Fusarium tumidum* as a potential bioherbicide for gorse and broom in New Zealand

Morin, L., Johnston, P.R., and Howarth, A.F. (129) Manaaki Whenua - Landcare Research, Auckland, New Zealand

Seasonal integration of the life-cycles of *Phragmidium violaceum* and blackberry in New Zealand

Pay, J.M., Dinoor, A., and Gaunt, R.E. (271) Department of Plant Science, Lincoln University, Lincoln, New Zealand

Control of stem end rot (*Lasiodyplodia theobromae* (Pat.) Griff. Maubl.) of mango with yeasts

Sangchote, S., and Saengkheew, M. (262) Department of Plant Pathology, Kasetsart University, Bangkok 10900 Thailand

Prospects for the biological control of sclerotial plant pathogens using mycoparasites

Stewart, A. (126) Department of Plant Science, PO Box 84, Lincoln University, Canterbury, New Zealand

Hyphal interactions between binucleate *Rhizoctonia* and the plant pathogen, *Pythium ultimum*

Siwek, K., Harris, A.R., and Scott, E.S. (265) Cooperative Research Centre for Soil & Land Management, Glen Osmond, SA 5064 Australia

The effect of preharvest pesticide sprays on microbial suppression of avocado anthracnose

Stirling, A.M., Pegg, K.G., and Hayward, A.C. (131) Department of Microbiology, The University of Queensland, QLD 4072 Australia

The mycoherbicidal potential of *Alternaria crassa* on *Datura stramonium*

Stewart-Wade, S.M., Lawrie, A.C., and Stevenson, T.W. (130) Department of Applied Biology and Biotechnology, Royal Melbourne Institute of Technology, Melbourne, VIC 3000 Australia

***Erwinia herbicola* Eh252 – A biological control agent of bacterial soft rot**

Vanneste, J.L., Cornish, D.A., and Yu, J. (134) Hort Research, Ruakura Research Centre, Private Bag 3123, Hamilton, New Zealand

Field evaluation of *Phloeospora mimosae-pigrae* for biological control of *Mimosapigra*

Weinert, M., Chakraborty, S., Forno, W., and Hennecke, B. (272) CSIRO Division of Tropical Crops and Pastures, St Lucia, QLD 4067 Australia

A leaf disc assay to identify drought tolerant microbial antagonists to control grape bunch rot (*Botrytis cinerea*)

Zapp, J., Stewart, A., and Elmer, P. (261) Department of Plant Science, PO Box 84, Lincoln University, Lincoln, New Zealand

Tree Diseases

Fire reduces levels of *Cryptodiaporthe melanocraspeda* inoculum in *Banksia coccinea* stands

Bathgate, J.A., and Shearer, B.L. (281) The University of Western Australia, Nedlands, WA 6009 Australia

Stand age is a major determinant of canker intensity in *Banksia coccinea* stands

Bathgate, J.A., and Shearer, B.L. (145) The University of Western Australia, Nedlands, WA 6009 Australia

Effect of *Mycosphaerella* leaf disease on growth of *Eucalyptus globulus* and genetic variation in susceptibility to infection

Carnegie, A.J., Ades, P.K., and Keane, P.J. (148) Forestry School, The University of Melbourne, Parkville, VIC 3052 Australia

The effect of fertiliser application on the severity of *Mycosphaerella cryptica* on adult foliage of *Eucalyptus globulus*

Carnegie, A.J., Ades, P.K., and Keane, P.J. (286) Forestry

School, The University of Melbourne, Parkville, VIC 3052 Australia

How important is the position of root damage in jarrah?

Davison, E.M. (146) 148 Bateman Road, Mt Pleasant, WA 6153 Australia

Root diseases of trees caused by higher fungi in Queensland and New Zealand

Hood, I. (143) Queensland Forest Research Institute, Indooroopilly QLD 4068 Australia

The biological control of sapstain of *Pinus radiata* with microorganisms

Kay, S.J., Stewart, A., and Hill, R.A. (144) Horticulture and Food Research Institute of New Zealand Ltd., Ruakura Research Centre, Private Bag 3123, Hamilton, New Zealand

Antagonism of *Rhizoctonia solani* and seed germination stimulation by *Eucalyptus regnans* seedling rhizosphere isolates

Lacey, M.J., and Line, M.A. (283) Department of Agricultural Science, University of Tasmania, GPO Box 252C, Hobart, TAS 7001 Australia

Use of molecular biology techniques to identify wood-rotting fungi

Madan, R., Lawrie, A.C., Stevenson T.W., and Johnson, G.C. (282) Dept of Applied Biology & Biotechnology RMIT, Melbourne, VIC 3000 Australia

Forest pathology in Tasmania

Mohammed, C.L., and Wardlaw, T.J. (147) Department of Agricultural Science, University of Tasmania, GPO Box 252C, Hobart, TAS 7001 Australia

Incidence and economic impact of *Elsinoe* scab of South African Proteaceae in Australia

Pascoe, I., Ziehl, A., and Porter, I. (285) Institute for Horticultural Development, SEMC, VIC 3176 Australia

Chestnut quality and *Phomopsis* nut rot control

Washington, W.S., Goubran, F., Salib, S., and Stewart-Wade, S. (284) Institute for Horticultural Development, Agriculture Victoria, SEMC, VIC 3176 Australia

Subtropical and Tropical Diseases

Transposon mutagenesis of *Clavibacter xyli* subsp. *xyli*, causal organism of ratoon stunting disease of sugarcane.

Brumbley, S.M., Petrasovits, L.A., Birch, R.G., and Taylor, P.W.J. (152) Bureau of Sugar Experiment Stations, 50 Meiers Rd., Indooroopilly, QLD 4068 Australia

Understanding cosmetic diseases of citrus

Fullerton, R.A., and Pennycook, S.R. (154) The Horticulture and Food Research Institute of New Zealand Ltd, Mt Albert Research Centre, Private Bag 92169, Auckland, New Zealand

A survey of citrus diseases in New Zealand

Ganev, S., Braithwaite, M., Hill, C.F., and Dance, M.D. (153) New Zealand Plant Protection Centre - Lincoln, PO Box 24, Lincoln, New Zealand

Phytoplasmas associated with papaya diseases in Australia

Gibb, K.S., Persley, D.M., and Schneider, B. (151) Faculty of Science, Northern Territory University, Darwin, NT 0909 Australia

Detection of Asiatic Citrus Canker in quarantine outbreaks, dried spices and herbarium specimens using a PCR assay

Gillings, M.R., Barkley, P., Fahy, P., and Barnes, D. (155) Biological & Chemical Research Institute, NSW Agriculture, PMB 10, Rydalmere, NSW 2116 Australia

Molecular diagnostics of Citrus Tristeza Virus

Gillings, M.R., Broadbent, P., and Indsto, J.O. (156) Biological & Chemical Research Institute, NSW Agriculture, PMB 10, Rydalmere, NSW 2116 Australia

The effect of water deficit and temperature on colonisation of mango seedlings by *Dothiorella dominicana*

Gosbee, M.J., Johnson, G.I., Joyce, D.C., and Irwin, J.A.G. (150) CSIRO Division of Horticulture, 306 Carmody Rd, St Lucia, QLD 4067 Australia

The effect of soil treatments on the activity and invasiveness of *Fusarium oxysporum cubense*, the cause of Panama Disease

Nasir, N., Pittaway, P., and Pegg, K. (149) Dept. of Plant Production, The University of Queensland, Gatton College, Lawes, QLD 4343 Australia

Techniques for histopathology studies of sugarcane root diseases

Pearson, S.J., Chakraborty, S., Croft, B.J., and Irwin, J.A.G. (287) Cooperative Research Centre for Tropical Plant Pathology, The University of Queensland, QLD 4072 Australia