

Publications

Publications are classified in the following manner:

- J Papers describing original research in refereed journals.
- R Critical reviews in journals, book chapters and reviews in books - providing each has been edited externally.
- P Published proceedings of contributions to conferences or learned societies (including published abstracts).
- T Technical reports, other publications.
- O Popular articles, other publications.

Allan, C.E., Wheeler, C.T., Handley, L.L. & Murphy, K.J. 2000. Adoptions of *Lotus pedunculatus* Cav. for Nitrogen fixation in a riverine wetland plant community. *Botanical Journal of Scotland* **52**, 149-158. J

Anon (Ramsay, G. & Hillman, J.R.). 2000. Scottish Crop Research Institute memorandum on gene flow and SCRI research. *Annex 1 - Eighth Report of the House of Commons Select Committee on Agriculture 'Genetically Modified Organisms and Seed Segregation'* HMSO, London, 9 pp. (<http://www.parliament.the-stationery-office.co.uk/pa/cm199900/cmselect/cmagric/812/812ap02.htm>). O

Armstrong, M.R., Banks, B., Birch, P.R.J., Jones, J.T., Phillips, M.S., Wishart, J. & Blok, V.C. 2000. Interactions between host roots and plant-parasitic nematodes. *Abstract of the British Society of Plant Pathology Presidential Meeting*, Wye, UK, 2000. P

Armstrong, M.R., Banks, B., Birch, P.R.J., Jones, J.T., Phillips, M.S., Wishart, J. & Blok, V.C. 2001. Comparisons of incompatible and compatible plant-parasitic nematode/host interactions. *MPMI '01 Conference*, Madison, Wisconsin, 10-14 July, 2001. P

Armstrong, M.R., Blok, V.C. & Phillips, M.S. 2000. A multipartite mitochondrial genome in the potato cyst nematode *Globodera pallida*. *Genetics* **154**, 181-192. J

Armstrong, M.R., Blok, V.C., Phillips, M.S. & Trudgill, D.L. 2000. Biological and molecular variation in potato cyst nematode (*Globodera pallida*). *Abstracts of the XXXII Annual Meeting of the Organization of Nematologists of Tropical America*, Alabama, USA, 2000, 46-47. P

Avrova, A.O., Bell, K.S., Waugh, R., Milbourne, D., Toth, I.K., Dellagi, A., De Jong, W., Hyman, L.J., Bryan, G.J. & Birch, P.R.J. 2000. Building physical maps of *Erwinia carotovora* subspecies to compare their genomic organisation and to identify novel pathogenicity and host range-related genes. *BSPP Presidential Meeting 2000: Plant Pathogen Interactions*, Wye College, UK, p.20. P

Avrova, A.O., Hyman, L.J., Toth, R.L. & Toth, I.K. 2000. Genetic variation within the *Erwinia carotovora* subspecies reflected in 16S-23S ITS and AFLP polymorphisms. *EPFP 2000 Biodiversity in Plant Pathology*, Taormina, Giardini Naxos, Italy, p.37. P

Avrova, A.O., Hyman, L.J., Toth, R.L. & Toth, I.K. 2000. Identification and differentiation of *Erwinia carotovora* subspecies using 16S-23S ribosomal spacer PCR-RFLP and AFLP. *Presidential Meeting, Plant Pathogen Interactions*, Wye College, UK, p.21. P

Aziz, N., Davidson, D., Easton, E., Hedley, P.E. & Machray, G.C. 2000. Inactivation of potato pollen germination. *Plant Molecular Biology Reporter*, **18** (Suppl.), S33-1. P

Baker, S.J., Newton, A.C. & Gurr, S.J. 2000. Cellular characteristics of temporary partial breakdown of mlo-resistance in barley to powdery mildew. *Physiological and Molecular Plant Pathology* **56**, 1-11. J

Bakker, J., Golinowski, W., Janssen, R., Klap, J., Mugniery, D., Phillips, M.S., Schlathölter, M. & Van Der Beek, J.G. 2001. Durable resistance management of soil-borne quarantine nematode pests *Meloidogyne chitwoodi* and *M. fallax*. *Nematology* **2**, 741. P

Barker, H. 2001. Potato leaf roll. In: Maloy, O.C. & Murray, T.D. (eds.). *The Encyclopedia of Plant Pathology*. John Wiley & Sons, Inc., 803-804. R

Barrie, I.A., Johnson, C.A. & Gordon, S.C. 2000. An appraisal of the UK raspberry cane midge prediction system and its application under differing European climates. *3rd European Conference on Applied Climatology*, Pisa, Italy 16-20 October. P

Baumgartl, T., Zingler, J. & Hallett, P.D. 2000. Repellency properties and stability of aggregates of a podzolic soil. *European Geophysical Society XXV General Assembly Millennium Conference on Earth, Planetary and Solar Systems Sciences*, Nice, France, April 25-29 2000. P

Bell, K.S. 2001. Report on molecular plant microbe interactions (10th International Congress, University of Wisconsin, Madison, USA). *British Society for Plant Pathology Newsletter*. O

Bell, K.S., Avrova, A.O., De Jong, W., Milbourne, D., Bryan, G.J., Toth, I.K., Waugh, R. & Birch, P.R.J. 2000. Investigating the pathogenicity of *Erwinia carotovora* subspecies by genome mapping using BAC libraries. *Agricultural Microbes Genome I*, San Diego, USA, p.27. P

Bell, K.S., Avrova, A.O., De Jong, W., Toth, I.K., Waugh, R., Bryan, G.J. & Birch, P.R.J. 2001. Sample sequencing of large, overlapping DNA fragments from *Erwinia carotovora* subsp. *atroseptica* reveals novel putative phytopathogenicity genes and allows comparison with the model animal pathogen *Escherichia coli*. *Agricultural Microbes Genomes II*, San Diego, Jan 2001. P

Bell, K.S., Roberts, J., Verrall, S., Cullen, D.W., Williams, N.A., Harrison, J.G., Toth, I.K., Cooke, D.E.L., Duncan, J.M. & Claxton, J.R. 2000. Detection and quantification of *Spongospora subterranea* f.sp. *subterranea* in soils and on tubers using specific PCR. *European Journal of Plant Pathology* **105**, 905-915. J

Bem, F., Robinson, D.J., Barker, H., Reavy, B. & Plastira, V. 2000. Viral protection in tobacco plants transformed with the 58K polymerase read-through gene of tobacco rattle virus. *Abstracts of the EMBO Workshop on Plant Virus Invasion and Host Defence*, Kolymbari, Crete, Greece, 2000, 58. P

Publications

- Bengough, A.G.** 2000. Impact of the soil physical environment on crop growth. *International Crop Science Congress Satellite Meeting*, Edinburgh, August 2000. P
- Bengough, A.G., Castrignano, A., Pages, L. & Van Noordwijk, M.** 2000. Sampling strategies, scaling and statistics. In: Smit, A.L., Bengough, A.G., Engels, C. & Van Noordwijk, M. (eds.). *Root Research: A Handbook of Methods*. Springer Verlag, 147-174. R
- Bengough, A.G., Iijima, M. & Barlow, P.W.** 2001. Image analysis of maize root caps - estimating cell numbers from 2-D longitudinal sections. *Annals of Botany* **87**, 693-698. J
- Bengough, A.G., Stubbs, V., Higuchi, T. & Iijima, M.** 2001. Engineering root system design for optimum function in structured soil. *International Society for Root Research*, 11-15 November 2001, Nagoya, Japan. P
- Bezginova, T., Thompson, J., Staines, H., Salmond, R., Krivtsov, V., Garside, A., Griffiths, B.S., Liddell, K., Watling, R. & Palfreyman, J.W.** 2001. Interrelations between leaf litter composition and nematodes in the 'Heron Wood Reserve', Peeblesshire, Scotland. *Russian Nematological Society*, Moscow, June 2001. P
- Birch, A.N.E.** 1999. Genetically Modified Foods, a flavour of the current issues. *Foodfuture Debates - Feedback from UK Question Time Debates* **16**, 22. O
- Birch, A.N.E.** 1999. Opinion of the Scientific Committee on Plants on Bt-resistance monitoring. *Technical Report for European Commission DGXXIV Consumer Policy and Consumer Health Protection Committee on Plants* 1999. O
- Birch, A.N.E., Hillier, J., Squire, G.R. & Crawford, J.W.** 2000. Environmental implications of genetically modified plants with insect resistance genes. *European Science Foundation Workshop*, Rome, May 2000, 28-30. P
- Birch, A.N.E., Hillier, J., Squire, G.R. & Crawford, J.W.** 2001. Impact of GM Crops on non-target species: Development of a generic mathematical model to predict potential ecological outcomes of using insect-resistance traits, leading to optimised deployment strategies within an IPM framework. *European Science Foundation Workshop: Environmental Implications of Genetically Modified Plants with Insect Resistance Genes*, Berne, 29-30 September, 2000. P
- Birch, A.N.E., Hillier, J., Squire, G.R. & Crawford, J.W.** 2001. Potential effects of insecticidal GM crops on non-target organisms: from laboratory to field scale experimentation - development of temporal and spatial modelling for optimised deployment in IPM. *Proceedings of the International Symposium of Insect Pathology*, Guanajuato, Mexico, September 2000. P
- Birch, P.R.J.** 2000. Searching for the pathways to disease resistance. *BioY2K Conference*, Grahamstown, South Africa, January 2000. P
- Birch, P.R.J. & Kamoun, S.** 2000. Studying interaction transcriptomes: coordinated analyses of gene expression during plant-microbe interactions. *Trends in Plant Science Supplement: Life Science Research in the 21st Century: a Trends Guide* 77-82. J
- Birch, P.R.J., Avrova, A.O., Dellagi, A., Lacomme, C., Santa Cruz, S. & Lyon, G.D.** 2000. To die and let live: programmed cell death in plants in response to pathogen attack. In: Dickinson, M. & Beynon, J. (eds.). *Molecular Plant Pathology, Annual Plant Reviews*. Sheffield Academic Press, Sheffield, 175-197. R
- Bird, R.M., Provan, J. & Powell, W.** 2000. The mother of maize. *American Scientist* 2000. O
- Blanch, E.W., Robinson, D.J., Hecht, L. & Barron, L.D.** 2001. A comparison of the solution structures of tobacco rattle and tobacco mosaic viruses from Raman optical activity. *Journal of General Virology* **82**, 1499-1502. J
- Blanco, P., Thow, G., Simpson, C.G. & Williamson, B.** 2000. Heterologous expression of polygalacturonase inhibiting protein (PGIP) from raspberry (poster). *Scottish Plant Cell & Molecular Biology Group Meeting*, University of St Andrews, 28 January. P
- Blanco, P., Thow, G., Simpson, C.G., Villa, T.G. & Williamson, B.** 2000. Expression of an endo-polygalacturonase from *Saccharomyces cerevisiae* in *Pichia pastoris*. *10th International Symposium on Yeasts*, Papendal, The Netherlands, 27 August-1 September 2000. P
- Blanco, P., Thow, G., Simpson, C.G., Villa, T.G., Steiro, C. & Williamson, B.** 2000. Estudio de una endopoligalacturonasa de *Saccharomyces cerevisiae* mediante mutagénesis dirigida. *5th National Congress of Mycology*, Cáceres, 20-23 September. P
- Blank, I., Fay, L.B., Goodman, B.A., Pascual, E.C., Stadler, R.H. & Yeretzian, C.** 1999. Degradation of the coffee flavour compound 2-furylthiol in model systems under Fenton reaction conditions. *American Chemical Society Congress*, Anaheim, March 1999. P
- Blank, I., Fay, L.B., Goodman, B.A., Pascual, E.C., Stadler, R.H. & Yeretzian, C.** 2000. Degradation of the coffee flavor compound furfuryl mercaptan in Fenton-type model systems. In: Parliament, T.H., Ho, C.-T. & Schieberle, P. (eds.). *Caffeinated Beverages, Health Benefits, Physiological Effects, and Chemistry*. American Chemical Society, Washington, D.C., 230-240. R
- Blank, I., Pascual, E.C., Fay, L.B., Stadler, R.H., Goodman, B.A. & Yeretzian, C.** 2000. Degradation of the coffee flavour compound furfuryl mercaptan in model Fenton reaction systems. *Nestlé R&D Report*. Nestlé. T
- Blok, V.C., Armstrong, M.R., Tzortzakakis, E.A. & Phillips, M.S.** 2000. Virulence and avirulence of root-knot nematodes on tomato. *Nematology* **2**, 745. P
- Blok, V.C., Boutsika, K., Castelli, L., Phillips, M.S., Smant, G. & Jones, J.T.** 2000. Neuropeptide type sequences and activities in *Globodera* spp. *Nematology* **2**, 745. P
- Blok, V.C., Neilson, R., Armstrong, M.A., Castelli, L., Trudgill, D.L. & Phillips, M.S.** 2001. Host selection for parasite phenotypes and genotypes. *British Society for Parasitology, Spring Meeting*, University of Keele, 17-20 April 2001. P
- Blok, V.C., Phillips, M.S., Armstrong, M.R., Jones, J.T. & Trudgill, D.L.** 2000. Prospects for managing *Globodera pallida*. *Abstracts of the 39th Annual Meeting of the Society of Nematologists*, Quebec, Canada, 2000. P
- Blok, V.C., Phillips, M.S., Armstrong, M.R., Jones, J.T. & Trudgill, D.L.** 2000. *Globodera pallida*: heterogeneity within the species. Is this a management problem? *Annals of Applied Biology* **59**, 75-84. J
- Boag, B. & Hunt, D.J.** 2000. The British nematode fauna. In: Hawsworth, D.L. (ed.). *The Changing Wildlife of Britain*. Taylor & Francis, London, 210-229. R
- Boag, B.** 2000. The impact of the New Zealand flatworm on earthworms and moles in agricultural land in Western Scotland. *Annals of Applied Biology* **62**, 79-84. J

- Boag, B., Filipe, J.A.N. & Niesten, D.** 2000. Spatial distribution of *Globodera rostochiensis* foci in a potato field in Scotland. *Annals of Applied Biology* **59**, 99-102. J
- Boerema, G.H., de Gruyter, J. & van de Graaf, P.** 1999. Contributions towards a monograph of *Phoma* (*Cyphomycetes*) IV - Supplement. An addition to section *Heterospora*: *Phoma schneiderae* spec. nov., synanamorph *Stagonosporopsis lupini* (Boerema & R. Schneid.) comb. nov. *Persoonia* **17**, 281-285. J
- Boersma, J.G., Cooke, D.E.L. & Sivasithamparam, K.** 2000. A survey of wildflower farms in the south-west of Western Australia for *Phytophthora* spp. associated with root rots. *The Australian Journal of Experimental Agriculture* **40**, 1011-1019. J
- Boevink, P., Haupt, S., Toth, R.L., Roberts, A.G. & Oparka, K.J.** 2001. Cell-cell movement of TMV in the absence of microtubules. *Abstract for the Plasmodesma 2001 Meeting*, Cape Town, South Africa, August 2001. P
- Bonkowski, M., Griffiths, B.S. & Ritz, K.** 2000. Food preferences of earthworms for soil fungi. *Pedobiologia* **44**, 666-676. J
- Bonkowski, M., Griffiths, B.S. & Scrimgeour, C.M.** 2000. Substrate heterogeneity and microfauna in soil organic 'hotspots' as determinants of nitrogen capture and growth of ryegrass. *Applied Soil Ecology* **14**, 37-53. J
- Boutsika, K., Blok, V.C., Phillips, M.S. & Brown, D.J.F.** 2000. Molecular diagnostics of virus-vector trichodorid nematodes. *Association of Applied Biologists, Offered Papers in Nematology*, Linnean Society of London, 12 December 2000. P
- Boutsika, K., Sadowska-Rybak, M., Blok, V.C., Phillips, M.S., MacFarlane, S.A., Heinze, C., Willingmann, P., Petz, C., Adam, G. & Brown, D.J.F.** 2000. PCR molecular diagnostics for virus-vector trichodorid nematodes and their associated tobacco rattle virus. *Association of Applied Biologists, Advances in Plant Virology*, Dundee, 20-22 September 2000. P
- Boutsika, K., Wendt, K.R., Blok, V.C., MacFarlane, S.A. & Brown, D.J.F.** 2000. Molecular detection of trichodorid nematodes and tobacco rattle tobravirus. *Russian Journal of Nematology* **8**, 86. J
- Bragard, C., Duncan, G.H., Wesley, S.V., Naidu, R.A. & Mayo, M.A.** 2000. Virus-like particles assemble in plants and bacteria expressing the coat protein gene of Indian peanut clump virus. *Journal of General Virology* **81**, 267-272. J
- Brasier, C.M., Cooke, D.E.L. & Duncan, J.M.** 1999. Origin of a new *Phytophthora* pathogen through interspecific hybridization. *Proceedings of the National Academy of Sciences, USA* **96**, 5878-5883. J
- Brennan, R.M. & Harrison, R.E.** 2000. Factors affecting the processing of red fruits. *Raw Materials and the Quality of Processed Foods*. Aspen Publishers Inc., Gathersburg, MD, USA, 97-123. R
- Brown, D.J.F. & MacFarlane, S.A.** 2001. 'Worms' that transmit viruses. *Biologist* **48**, 35-40. J
- Brown, D.J.F.** 2001. Virus transmission - nematode vectors. In: Maloy, O.C. & Murray, T.D. (eds.). *Encyclopaedia of Plant Pathology*. John Wiley & Sons, Inc., New York, 1165-1168. R
- Bruce, A., Wheatley, R.E. & Verrall, S.** 2000. Effect of volatiles from bacteria and yeast on the growth and pigmentation of sap-stain fungi. *Proceedings of 31st Meeting of International Research Group on Wood Preservation*, Hawaii, May 2000. P
- Bryan, G.J., McLean, K., De Jong, W., Bradshaw, J.E., Hackett, C.A., Phillips, M.S., Castelli, L., Milbourne, D., Pande, B. & Waugh, R.** 2001. Mapping polygenic potato cyst nematode (PCN) resistance in diploid and tetraploid populations of potato. *Plant and Animal Genome IX*, San Diego, Jan 2001. P
- Bryan, G.J., Milbourne, D. & Waugh, R.** 2000. Potato genomics at SCRI. *HRI*, Wellesbourne. October, 2000. P
- Brzeski, M.W., Peneva, V. & Brown, D.J.F.** 2000. *Longidorus balticus* sp. nov. (Nematoda: Longidoridae) from coastal sand dunes in northeastern Poland. *Annales Zoologici (Warszawa)* **50**, 321-325. J
- Canto, T. & Palukaitis, P.** 2001. A cucumber mosaic virus (CMV) RNA1 transgene mediates suppression of the homologous viral RNA1 constitutively and prevents CMV entry into the phloem. *Journal of Virology* **75**, 9114-9120. J
- Canto, T. & Palukaitis, P.** 2001. A novel gene in the tobacco mosaic virus genome encodes a 4kDa protein involved in pathogenicity. *Abstracts of the 20th Meeting, American Society for Virology*, Madison, Wisconsin, USA, July, 2001, 81. P
- Canto, T., Choi, S.K. & Palukaitis, P.** 2001. A subpopulation of *Cucumber mosaic virus* RNA 1 contains 3' termini originating from RNAs 2 and 3. *Journal of General Virology* **82**, 941-945. J
- Cardle, L., Ramsay, L., Milbourne, D., Macaulay, M., Marshall, D.F. & Waugh, R.** 2000. Computational and experimental characterization of physically clustered simple sequence repeats in plants. *Genetics* **156**, 847-854. J
- Carew, J., Gillespie, T., White, J., Wainwright, H., Brennan, R.M. & Battey, N.H.** 2000. The control of the annual growth cycle in raspberry. *Journal of Horticultural Science and Biotechnology* **75**, 495-503. J
- Carew, J., Gillespie, T., White, J., Wainwright, H., Brennan, R.M. & Battey, N.H.** 2000. Techniques for manipulation of the annual growth cycle in raspberry. *Journal of Horticultural Science and Biotechnology* **75**, 504-509. J
- Castelli, L., Ramsay, G., Neilson, S. & Phillips, M.S.** 2000. Screening the Commonwealth Potato Collection for novel sources of resistance to the Potato Cyst Nematode *Globodera pallida*. *AAB Nematology Meeting*, Linnaean Society, London, December 2000. P
- Castelli, L., Ramsay, G., Neilson, S.J. & Phillips, M.S.** 2000. Screening the Commonwealth Potato Collection for novel sources of resistance to the Potato Cyst Nematode *Globodera pallida*. *Nematology* **2**, 747. P
- Caul, S., Crabb, D., Daniell, T.J., Griffiths, B.S., Ritz, K. & Wheatley, R.E.** 2001. Temporal differences in nitrification in relation to changes in microbial populations of arable soil. *Molecular Microbial Ecology Group*, York, 2001. P
- Caul, S., Wheatley, R.E., Ritz, K., Griffiths, B.S., Crabb, D. & Daniell, T.J.** 2001. Microbial population dynamics related to temporal variations in nitrification function in an arable field soil. *Interactions in the Microbial World: 9th International Symposium on Microbial Ecology*, Amsterdam, August 2001. P
- Chang, S.X. & Handley, L.L.** 2000. Site history affects soil and plant $\delta^{15}\text{N}$ natural abundances ($\delta^{15}\text{N}$) in forests of

Publications

- northern Vancouver Island, British Columbia. *Functional Ecology* **14**, 273-280. J
- Chen, Q., Robertson, L., Jones, J.T., Blok, V.C., Phillips, M.S. & Brown, D.J.F.** 2000. Magnetic capture of nematodes using antiserum and lectin coated dynabeads. *Nematology* **2**, 748. P
- Christie, W.W.** 2000. Another look at the analysis of conjugated linoleic acid. *Lipid Technology* **12**, 64-66. O
- Christie, W.W.** 2000. Silver ion chromatography. *Encyclopaedia of Separation Science*. Academic Press, London, 4112-4117. R
- Christie, W.W.** 2000. What column do I need for gas chromatographic analysis of fatty acids? *Lipid Technology* **12**, 114-115. O
- Christie, W.W. & Dobson, G.** 1999. Thin-layer chromatography revisited. *Lipid Technology* **11**, 64-66. O
- Christie, W.W. & Dobson, G.** 2000. Formation of cyclic fatty acids during the frying process. *European Journal of Lipid Science and Technology* **1**, 515-520. J
- Christie, W.W., Dobson, G. & Shepherd, T.** 1999. Laboratory accreditation in a lipid analytical laboratory. *Lipid Technology* **11**, 118-119. O
- Christie, W.W., Fernie, C.E., Scrimgeour, C.M., Dobson, G., Sassano, G., Juaneda, P. & Sebedio, J.L.** 2001. Inter-laboratory comparison of analytical methods for the analysis of CLA isomers. *CLA Concerted Action Group Newsletter: What's Going On* **6**, 1-2. O
- Christie, W.W., Robertson, G.W., McRoberts, W.C. & Hamilton, J.T.G.** 2000. Mass spectrometry of the 4,4-dimethyloxazoline derivatives of isomeric octadecenoates (monoenoines). *European Journal of Lipid Science and Technology* **102**, 23-29. J
- Christie, W.W., Sebedio, J.L. & Juaneda, P.** 2001. A practical guide to the analysis of conjugated linoleic acid (CLA). *INFORM* **12**, 147-152. O
- Clegg, C.D., Ritz, K. & Griffiths, B.S.** 2000. %G+C profiling and cross hybridisation of microbial DNA reveals great variation in below-ground community structure in UK upland grasslands. *Applied Soil Ecology* **14**, 125-134. J
- Cooke, D.E.L. & Smith, J.** 2000. 'Know your enemy'. *New Agriculturalist On-Line Web* 2000. O
- Cooke, D.E.L., Duncan, J.M., Williams, N.A., Hagenaar-de Weerdt, M. & Bonants, P.J.M.** 2000. Identification of *Phytophthora* species on the basis of restriction enzyme fragment analysis of the Internal Transcribed Spacer regions of ribosomal RNA. *EPPO Conference*, Wageningen, February 2000, 30(519-523). P
- Cooke, D.E.L., Jung, T., Williams, N.A., Schubert, R., Oswald, W.F. & Duncan, J.M.** 1999. A comparison of AFLP diversity in *Phytophthora quercina* and *Phytophthora citricola* populations (E. Hansen & W. Sutton eds). *IUFRO First International Meeting on Phytophthora in Forest and Wildland Ecosystems*, Grants Pass, Oregon, September 1999, 101. P
- Cooke, D.E.L., Jung, T., Williams, N.A., Schubert, R., Oswald, W.F. & Duncan, J.M.** 1999. Pathogen population analysis: a comparison of *P. quercina* and *P. citricola*. *International Meeting on Phytophthora in Natural Ecosystems*. P
- Cooke, D.E.L., Williams, N.A. & Duncan, J.M.** 2001. The reliability of rDNA internal transcribed spacer sequence analysis in *Phytophthora* identification and taxonomy. *Second International IUFRO Meeting on Phytophthora in Forests and Natural Ecosystems*, Albany, Australia. P
- Cowan, G., Lioliopoulou, F., Ziegler, A. & Torrance, L.** 2001. Towards a functional analysis of *Potato mop top virus* triple block proteins. *Abstract of the 6th International Symposium and RNA Viruses*, Paris, France, June 2001. P
- Crawford, J.W., Pachepsky, E., Bown, J. & Squire, G.R.** 2000. Linking individual behaviour and community scale patterns in ecology. *University of Princeton*, USA, September 2000. P
- Crawford, J.W., Young, I.M., Ritz, K., Nunan, N., Wu, K., Leake, C., Roberts, D. & Humm, J.** 2000. Predicting the environmental fate of organic compounds in soils. *Soil Microbiology and Sustainable Agriculture, 3rd International Symposium on Environmental Aspects of Pesticide Microbiology*, Monheim, August 2000. P
- Croser, C., Bengough, A.G. & Pritchard, J.** 2000. The effect of mechanical impedance on root growth in pea (*Pisum sativum*). II. Cell expansion and wall rheology during recovery. *Physiologia Plantarum* **109**, 150-159. J
- Crozzoli, R., Lamberti, F., Molinari, S., Agostinelli, A., He, Y., Moens, M., Greco, N., Radicci, V. & Brown, D.J.F.** 2000. *Longidorus edmundsi* (Nematoda:Dorylaimida), a new record for South America. *Nematologia Mediterranea* **28**, 213-220. J
- Cullen, D., Lees, A., Toth, I.K. & Duncan, J.M.** 2001. Conventional PCR and real-time quantitative PCR detection of *Helminthosporium solani* in soil and on potato tubers. *European Journal of Plant Pathology* **107**, 387-398. J
- Cullen, D.W. & Errampalli, D.** 2000. PCR detection of *Helminthosporium solani*, the causal agent of silver scurf of potato, with potato. *Canadian Journal of Plant Pathology* **22**, 183. P
- Cullen, D.W., Lees, A.K., Toth, I.K., Bell, K.S. & Duncan, J.M.** 2000. Detection and quantification of fungal and bacterial potato pathogens in plants and soil. *EPPO Conference on Diagnostic Techniques for Plant Pests*, Wageningen, The Netherlands, 1-4 February 2000, p.46. P
- Czarnes, S., Hallett, P.D., Bengough, A.G. & Young, I.M.** 2000. Root-and-microbial-derived mucilages affect soil structure and water transport. *European Journal of Soil Science* **51**, 435-443. J
- Dale, M.F.B. & Mackay, G.R.** 2001. Composition of potatoes: an increasingly important and versatile crop. *Food Industry Journal* **4**, 221-228. J
- Dale, M.F.B., Robinson, D.J., Griffiths, D.W., Todd, D. & Bain, H.** 2000. Effects of tuber-borne M-type strain of *Tobacco rattle virus* on yield and quality attributes of potato tubers of the cultivar, Wilja. *European Journal of Plant Pathology* **106**, 275-282. J
- Daniell, T.J., Clegg, C.D., Griffiths, B.S., Ritz, K., Squires, J., Verrall, S. & Wheatley, R.E.** 2001. Coupling between plants and diversity of nitrite-reducing bacteria in an upland pasture. *Interactions in the Microbial World: 9th International Symposium on Microbial Ecology*, Amsterdam, August 2001. P
- Daniell, T.J., Davy, M.L. & Smith, R.J.** 2000. Development of a genetically modified bacteriophage for use in tracing sources of pollution. *Journal of Applied Microbiology* **88**, 860-869. J

- Daniell, T.J., Hodge, A., Young, J.P.W. & Fitter, A.** 1999. How many fungi does it take to change a plant community? *Trends in Plant Science* **4**, 81-82. J
- Daniell, T.J., Husband, R., Fitter, A.H. & Young, J.P.W.** 2001. Molecular diversity of arbuscular mycorrhizal fungi colonising arable crops. *FEMS Microbiology Ecology* **36**, 203-209. J
- Davidson, D.A., Carter, C., Boag, B., Long, D., Tipping, R. & Tyler, A.** 1999. Analysis of pollen in soils: processes of incorporation and redistribution of five soil profile types. *Soil Biology and Biochemistry* **31**, 643-653. J
- Davies, K.G., Fargette, M., Balla, G., Daudi, A., Duponnois, R., Gowen, S.R., Mateille, T., Phillips, M.S., Sawadogo, A., Trivino, C., Vouyoukalo, E. & Trudgill, D.L.** 2001. Cuticle heterogeneity as exhibited by *Pasteuria* spore attachment is not linked to the phylogeny of parthenogenetic root-knot nematodes (*Meloidogyne* spp.). *Parasitology* **122**, 112-120. J
- de Luca, S., Whisson, S.C., Cristinzio, G. & Birch, P.R.J.** 2000. Characterisation of the molecular basis of pathogenicity in *Phytophthora infestans* early in the interaction with potato. *5th Congress of the European Foundation for Plant Pathology*, Taormina, Italy, p.205. P
- de Vallavieille-Pope, C., Giosue, S., Munk, L., Newton, A.C., Niks, R., Østergård, H., Pons, J., Rossi, V. & Sache, I.** 2000. Assessment of epidemiological parameters and their use in epidemiological and forecasting models of cereal airborne diseases. *Agronomie: Plant Genetics and Breeding* **20**, 715-727. J
- Deeks, L., Bengough, A.G., Low, D., Zhang, X., Young, I.M., Crawford, J.W., Chessell, J.M. & Billet, M.F.** 2000. Spatial analysis of soil physical properties in a UK upland subcatchment. *3rd International Congress on Geostatistics*, Avignon, November 2000. P
- Deighton, N., Muckenschnabel, I., Colmenares, A.J., Collado, I.G. & Williamson, B.** 2001. Botrydial is produced in plant tissues infected by *Botrytis cinerea*. *Phytochemistry* **57**, 689-692. J
- Deighton, N., Muckenschnabel, I., Goodman, B.A. & Williamson, B.** 1999. Lipid peroxidation and the oxidative burst associated with infection of *Capsicum annuum* by *Botrytis cinerea*. *The Plant Journal* **20**, 485-492. J
- Dellagi, A., Heilbronn, J., Avrova, A.O., Montesano, M., Palva, E.T., Stewart, H.E., Toth, I.K., Cooke, D.E.L., Lyon, G.D. & Birch, P.R.J.** 2000. A potato gene encoding a WRKY-like transcription factor is induced in compatible interactions with *Erwinia carotovora* subsp. *atroseptica* and *Phytophthora infestans* and is co-regulated with class I endochitinase expression. *Molecular Plant Microbe Interactions* **13**, 1092-1101. J
- Dickson, J.H., Oegg, K., Holden, T.G., Handley, L.L., O'Connell, T.C. & Preston, T.** 2000. The omnivorous Tyrolean iceman: colon contents (meat, cereals, pollen, moss and whipworm) and stable isotope analyses. *Philosophical Transactions of the Royal Society of London B* **355**, 1-7. J
- Dobson, G. & Deighton, N.** 2001. Analysis of phospholipid molecular species by liquid chromatography - atmospheric pressure chemical ionisation mass spectrometry of diacylglycerol nicotinates. *Chemistry and Physics of Lipids* **111**, 1-17. J
- Dobson, G. & Sebedio, J.L.** 1999. Monocyclic dienoic fatty acids formed from gamma-linolenic acid in heated evening primrose oil. *Chemistry and Physics of Lipids* **97**, 105-118. J
- Dobson, G.** 1999. Cyclic fatty acids in heated vegetable oils: structures and mechanisms. In: Knothe, G. & Derksen, J.T.P. (eds.). *Recent Developments in the Synthesis of Fatty Acid Derivatives*. AOCS Press, Champaign, 196-212. R
- Dobson, G.** 2000. Leaf lipids of *Ribes nigrum*: a plant containing 16:3, α -18:3, γ -18:3 and 18:4 fatty acids. *Biochemical Society Transactions* **28**, 583-586. J
- Dobson, G., Ruiz, M., Brennan, R.M. & Gordon, S.** 2001. γ -Linolenic acid content in the seeds of blackcurrant genotypes. *Natural Products Biology Workshop*, University of Warwick, May 2001. P
- Drescher, A., Ivandic, V., Walther, U. & Graner, A.** 2000. High-resolution mapping of the Rph 16 locus in barley. *Proceedings of the 8th International Barley Genetics Symposium, Barley Genetics VIII (II)*, Adelaide, 22-27 October 2000, 95-97. P
- Duncan, J.M.** 2000. Prospects for integrated control of *Phytophthora* diseases of strawberry. *International Strawberry Symposium*, Tampere, Finland, July 2000. P
- Duncan, J.M.** 2001. Prospects for integrated control of raspberry root rot. *International Organisation for Biological and Integrated Control of Noxious Animals and Plants, IOBC/WRPS*, Dundee, Scotland, 18-21 September 2001. P
- Duncan, J.M.** 2001. Redcore. *Third and Final Year Progress Report to EU DGXII (SMT4-CT97-2162)* 1-42. O
- Duncan, J.M. & Cooke, D.E.L.** 2001. Root rot research at SCRI. *8th International Rubus and Ribes Symposium*, Dundee, 4-11 July 2001. P
- Duncan, J.M., Birch, P.R.J., Cooke, D.E.L. & Whisson, S.C.** 2001. Research on late blight in Scotland: from genomics to the field. University of Catania, Sicily, Italy, 12 April. P
- Duncan, J.M., Cooke, D.E.L., Mirabolfathy, M. & Williams, N.A.** 2001. Relationships within and between *Phytophthora* and other Oomycetes as revealed by two types of molecular markers. *Triennial EFPP Conference*, Taormina, Sicily, Italy, September 2000. P
- Duncan, J.M., Cooke, D.E.L., Seemüller, E., Bonants, P.J. & Olsson, C.** 2000. European collaboration on eliminating *Phytophthora fragariae* from strawberry multiplication. *EPPO Conference on Diagnostic Techniques for Plant Pests*, Wageningen, February 2000, 30, 513-517. P
- Duncan, J.M., Cooke, D.E.L., Williams, N.A., Guy, D. & Cacciola, S.** 2001. Identification of *Phytophthora* and its detection in plants, soil and water: a molecular approach. University of Palermo, Sicily, Italy, 6 April. P
- Durban, M.L. & Currie, I.D.** 2000. Exact adjustment of the profile likelihood for a class of normal regression models. *Scandinavian Journal of Statistics* **27**, 535-542. J
- Durban, M.L. & Glasbey, C.A.** 2000. Weather modelling using a multivariate latent Gaussian process. *International Biometric Society, XXth International Biometric Conference*, University of California at Berkeley, 1-7 July 2000, Vol 1, 67-68. P
- Durban, M.L., Currie, I.D. & Kempton, R.A.** 2000. Adjusting for fertility and competition in variety trials. *Journal of Agricultural Science* **136**, 129-140. J
- Ehwaeti, M.E., Elliot, M.J., McNicol, J.W., Phillips, M.S. & Trudgill, D.L.** 2000. Modelling nematode population growth and damage. *Crop Protection* **19**, 739-745. J

Publications

- Elliot, M.J., Evans, K., Phillips, M.S., McNicol, J.W., Minnis, S., Haydock, P. & Trudgill, D.L.** 2000. Computer modelling of the integrated management of *Globodera pallida*: a nematode out of control in the UK? *Abstracts of the XXXII Annual Meeting of the Organization of Nematologists of Tropical America*, Alabama, USA, 2000, 53. P
- Elliot, M.J., Phillips, M.S., McNicol, J.W. & Trudgill, D.L.** 2000. The scope and limitations of a computer programme for the integrated control of potato cyst nematodes. *Nematology* **2**, 753. P
- Ellis, R.P., Forster, B.P. & Thomas, W.T.B.** 2000. Comparative mapping of root traits in barley. *IACR - Rothamsted Millennium Conference, Interactions in the Root Environment - an Integrated Approach*, Rothamsted. P
- Ellis, R.P., Forster, B.P., Robinson, D., Handley, L.L., Gordon, D.C., Russell, J.R. & Powell, W.** 2000. Wild barley: a source of genes for crop improvement in the 21st century? *Journal of Experimental Botany* **51**, 9-17. J
- Ellis, R.P., Ramsay, L., McLean, K., Macaulay, M., Waugh, R. & Powell, W.** 2000. A molecular dissection of the genetic effects of domestication in barley. *Proceedings of the 8th International Barley Genetics Symposium, Barley Genetics VIII (III)*, Adelaide, 22-27 October 2000, 58-60. P
- Ellis, R.P., Thomas, W.T.B. & Swanston, J.S.** 2000. The use of mapped SSRs to examine the historical changes in barley germplasm in Europe. *Proceedings of the 8th International Barley Genetics Symposium, Barley Genetics VIII (II)*, Adelaide, 22-27 October 2000, 8-10. P
- Ernst, K., Kloos, D., Kriselait, D., Kumar, A., Phillips, M.S. & Ganal, M.** 2001. Map-based cloning of the *Hero* resistance gene conferring resistance to potato cyst nematodes. *Abstracts of Proceeding of Plant and Animal Genome IX*, San Diego, USA, 85. P
- Errampalli, D., Saunders, J. & Cullen, D.** 2001. A PCR-based method for detection of potato pathogen, *Helminthosporium solani*, in silver scurf infected tuber tissue and soils. *Journal of Microbiological Methods* **44**, 59-68. J
- Escaler, M., Aranda, M.A., Roberts, I.M., Thomas, C.L. & Maule, A.J.** 2000. A comparison between virus replication and abiotic stress (heat) as modifiers of host gene expression in pea. *Molecular Plant Pathology* **1**, 159-167. J
- Fauquet, C.M. & Mayo, M.A.** 2001. The 7th ICTV Report. *Archives of Virology* **146**, 189-194. J
- Fenton, B.** 2000. Speciation and biogeography in eriophyid mites: a review. *European Association of Acarologists*, Siena. P
- Fenton, B., Birch, A.N.E., Malloch, G., Lanham, P.G. & Brennan, R.M.** 2000. Gall mite molecular phylogeny and its relationship to the evolution of plant host specificity. *Experimental and Applied Acarology* **24**, 831-861. J
- Finckh, M.R., Gacek, E.S., Goyeau, H., Lannou, C., Merz, U., Mundt, C.C., Nadziak, J., Newton, A.C., de Vallavicelle-Pope, C. & Wolfe, M.S.** 2000. Cereal cultivar and species mixtures in practice. *Agronomie: Plant Genetics and Breeding* **20**, 813-837. J
- Fitter, A.H., Hodge, A., Daniell, T.J. & Robinson, D.** 1999. Resource sharing in plant-fungus communities: did the carbon move for you? *Trends in Ecology and Evolution* **14**, 70-70. J
- Fomina, M., Ritz, K. & Gadd, G.M.** 2000. Negative fungal chemotropism to toxic metals. *FEMS Microbiology Letters* **193**, 207-211. J
- Forster, B.P.** 2000. Co-ordinators report: chromosome 4H. *Barley Genetics Newsletter*, 30. T
- Forster, B.P., Ellis, R.P., Newton, A.C., Morris, W.L., Moir, J., Lyon, J., Keith, R., Tuberosa, R., Talame, V., This, D., Teulat-Merah, B., El-Enein, R.A., Bahri, H. & Ben Salem, M.** 2000. Stable yields in Mediterranean barley: application of molecular technologies in improving drought tolerance and mildew resistance. *Proceedings of the 8th International Barley Genetics Symposium, Barley Genetics VIII (III)*, Adelaide, 22-27 October 2000, 273-274. P
- Forster, B.P., Ellis, R.P., Robinson, D., Handley, L.L., Scrimgeour, C.M. & Thomas, W.T.B.** 2000. QTL mapping of root traits in a doubled haploid population segregating for two dwarfing genes tested in control and salt stressed conditions. *Proceedings of the 8th International Barley Genetics Symposium, Barley Genetics VIII (III)*, Adelaide, 22-27 October 2000, 247-248. P
- Forster, B.P., Ellis, R.P., Thomas, W.T.B. & Bengough, A.G.** 2000. Effects of mutant dwarfing genes on root traits in barley. *First Research Coordination Meeting on Mutational Analysis of Root Characters in Annual Food Plants Related to Plant Performance*, IAEA, Vienna, February 2000. P
- Forster, B.P., Ellis, R.P., Thomas, W.T.B., Handley, L.L., Robinson, D., Russell, J.R. & Ivandic, V.** 2000. Genotypic variation for root traits in wild barley. *IACR - Rothamsted Millennium Conference, Interactions in the Root Environment - an Integrated Approach*, Rothamsted. P
- Forster, B.P., Ellis, R.P., Thomas, W.T.B., Newton, A.C., Tuberosa, R., This, D., El-Enein, R.A., Bahri, M.H. & Ben Salem, M.** 2000. The development and application of molecular markers for abiotic stress tolerance in barley. *Journal of Experimental Botany* **51** (MP Special Issue), 18-27. J
- Forster, B.P., Ellis, R.P., Thomas, W.T.B., Waugh, R., Ivandic, V., Tuberosa, R., Talame, V., This, D., Teulat-Merah, B., El-Enein, R.A., Bahri, M.H. & Ben Salem, M.** 2000. Research developments in genetics of drought tolerance in barley. *Proceedings of the 8th International Barley Genetics Symposium, Barley Genetics VIII (I)*, Adelaide, 22-27 October 2000, 233-237. P
- Forster, B.P., Prina, A.R., Camargo, C., Sant'ana, E., Nawrot, M. & Carter, T.** 2000. Roots in soil stresses - methodology (a breeder's perspective). *First Research Coordination Meeting on Mutational Analysis of Root Characters in Annual Food Plants Related to Plant Performance*, IAEA, Vienna, February 2000. P
- Gardner, H.W. & Deighton, N.** 2001. Effect of 4-Hydroxy-2(E)-nonenal inhibits soybean lipoxygenase-1. *Lipids* **36**, 623-628. J
- Gardner, P.T., Duthie, G.G., Deighton, N. & Davies, H.V.** 2000. Phytochemicals implicated in the antioxidant potential of soft fruit. *Rank Prize Fund Symposium*, IFR, Norwich, November 2000. P
- Geoghegan, I.E.** 2001. Ladybirds - can you spot them?. *The Caledonian Gardener* 2001. O
- Geoghegan, I.E., Chudek, J.A., MacKay, R.L., Lowe, C., Moritz, S., McNicol, R.J., Birch, A.N.E., Hunter, G. & Majerus, M.E.N.** 2000. Study of anatomical changes in *Coccinellae septempunctata* (Coleoptera:Coccinellidae) induced by diet and by infection with the larva of *Dinocampus coccinellae* (Hymenoptera:Braconidae) using magnetic resonance microimaging. *European Journal of Entomology* **97**, 457-461. J

- Gildow, F.E., Reavy, B., Mayo, M.A., Duncan, G.H., Woodford, J.A.T., Lamb, J.W. & Hay, R.T.** 2000. Aphid acquisition and cellular transport of *Potato leafroll virus*-like particles lacking P5 readthrough protein. *Phytopathology* **90**, 1153-1161. J
- Gillespie, T., Haupt, S., Toth, R.L., Roberts, A.G. & Oparka, K.J.** 2001. Elucidation of the improved functions of a DNA shuffled TMV movement protein. *Abstract for the Plasmodesma 2001' Meeting*, Cape Town, South Africa, August 2001. P
- Gillespie, T., Toth, R.L., Haupt, S., Boevink, P., Roberts, A.G., Chapman, S. & Oparka, K.J.** 2001. A DNA-shuffled movement protein enhances transport of TMV by evasion of a host degradation pathway. *Abstract for the Plasmodesma 2001' Meeting*, Cape Town, South Africa, August 2001. P
- Glasbey, C.A. & Glidewell, S.M.** 2000. The application of multivariate statistical methods to NMR imaging. *Computers and Electronics in Agriculture* **32**, 85-100. J
- Glidewell, S.M.** 2000. Chips with everything - Find the Fat. *Abstracts of 28th Scottish Microscopy Symposium*, Moredun Research Institute, Penicuik, 2000. P
- Goodman, B.A. & Pascual, E.C.** 2001. Free radicals and other paramagnetic ions in coffee solutions. *Association Scientifique Internationale du Café, 2001*, Trieste, Italy. P
- Goodman, B.A. & Reichenauer, T.G.** 1999. Formation of oxidation products in leaves of wheat, *Triticum aestivum*, as a result of ozone-induced stress. *International Congress on Cellular Responses to Oxidative and Osmotic Stress*, Egmond aan Zee, The Netherlands, August 1999. P
- Goodman, B.A., Muckenschnabel, I., Deighton, N., Lyon, G.D., Stewart, D. & Williamson, B.** 1999. The involvement of free radicals and paramagnetic transition metal ions in the interaction between plant tissues and the grey mould fungus, *Botrytis cinerea*. *Proceedings of the International Congress on Cellular Responses to Oxidative and Osmotic Stress, Sensing, Signalling and Gene Expression*, Egmond aan Zee, The Netherlands, 28 August - 1 September, 102. P
- Gordon, S.C.** 2000. Emerging Technologies for Integrated Pest Management: Concepts, Research and Implementation (Kennedy, G.G. & Sutton, T.B. (eds.)). *Experimental Agriculture*. T
- Gordon, S.C.** 2000. Project FAIR-FA-S2-CT97-9038: Reduced Application of Chemicals in European Raspberry Production (RACER). *Co-ordinator's Final (24-month) Report to EU Commission, May 2000*, 361pp. O
- Gordon, S.C.** 2001. Vine weevils and other wingless weevils - understanding and managing these insect pests in the garden. *The Royal Caledonian Horticultural Society, Caledonian Gardener*. O
- Gordon, S.C. & Williamson, B.** 2001. Overview of pest and disease problems of cane, bush and other woody perennial soft fruits in Europe. *COST ACTION 836 Working Group 6 Meeting*, Lisbon, 1-3 February 2001. P
- Gordon, S.C. & Woodford, J.A.T.** 2000. Aims and objectives of reduced application of chemicals in European raspberry production (RACER) project. *IOBC/WPRS Bulletin*. T
- Gordon, S.C., Barrie, I.A., Woodford, J.A.T., Grassi, A., Zini, M., Tuovinen, T., Lindqvist, I., Hohn, H., Schmid, K., Breniaux, D. & Brazier, C.** 2001. Development of a Pan-European monitoring system to predict emergence of first generation raspberry cane midge in raspberry. *8th International Rubus-Ribes Symposium*, Dundee, July 2001. P
- Gordon, S.C., Woodford, J.A.T., Grassi, A., Zini, M., Tuovinen, T., Lindqvist, I. & McNicol, J.W.** 2001. Monitoring and importance of wingless weevils (*Otiorrhynchus* spp.) in European red raspberry. *IOBC Bulletin (Workshop)*, September 2001, Dundee. P
- Gordon, S.C., Woodford, J.A.T., McNicol, J.W. & Williamson, B.** 2000. Reduced Application of Chemicals in European Raspberry Production. *Final Report to EU FAIR-FA-S2-CT97-9038*, 256pp. O
- Gordon, S.L. & Cormack, M.R.** 2000. Raspberry cultivar trial, 1986-1991. *Scottish Society for Crop Research Occasional Publication* **11**, 1-20. O
- Graham, J. & Gordon, S.C.** 1999. A review of the importance of wingless weevils as horticultural pests, with reference to strawberries, and current and future strategies for their management. *Advances in Strawberry Research* **18**, 16-24. J
- Gray, L.J., Curtis, R.H.C. & Jones, J.T.** 2000. Characterisation of a collagen gene subfamily from the potato cyst nematode *Globodera pallida*. *Gene* **263**, 67-75. J
- Griffiths, B.S.** 2000. Roles of protozoa and nematodes in ecosystems. Soil, sediment and aquatic fauna studies in LTER sites: methods for their study, and impacts of invertebrates on ecosystem function. *LTER All Scientists Meeting Workshop*, Snowbird, Utah, August 2000. P
- Griffiths, B.S.** 2000. The role of nematodes in the mineralization of nutrients from terrestrial ecosystems. *Techniques in Nematode Ecology*. Society of Nematologists Online Manual, http://ianrwww.unl.edu/son/Ecology_Manual_TOC.htm. T
- Griffiths, B.S. & Ritz, K.** 2000. Functional stability as an indicator of soil quality. *British Society of Soil Science*, Reading, September 2000. P
- Griffiths, B.S. & Ritz, K.** 2001. Stability of soil ecosystem processes following the experimental manipulation of soil microbial community diversity - an update. *The Soil Ecology Society*, Georgia, USA, May 2001. P
- Griffiths, B.S., Bonkowski, M., Roy, J. & Ritz, K.** 2000. Functional stability, substrate utilisation and biological indicators of soils following environmental impacts. *Applied Soil Ecology* **16**, 49-61. J
- Griffiths, B.S., Geoghegan, I.E. & Robertson, W.M.** 2000. Testing genetically engineered potato, producing the lectins GNA and CON A, on non-target soil organisms and processes. *Journal of Applied Ecology* **37**, 159-170. J
- Griffiths, B.S., Ritz, K., Bardgett, R.D., Cook, R., Christensen, S., Ekelund, F., Sørensen, S., Bäath, E., Bloem, J., de Ruiter, P., Dolsing, J. & Nicolardot, B.** 2000. Ecosystem response of pasture soil communities to fumigation-induced microbial diversity reductions: an examination of the biodiversity-ecosystem function relationship. *Oikos* **90**, 279-294. J
- Griffiths, B.S., Ritz, K., Ebblewhite, N. & Dobson, G.** 1999. Soil microbial community structure: effects of substrate loading rates. *Soil Biology and Biochemistry* **31**, 145-153. J
- Griffiths, D.W., Bain, H., Deighton, N., Botting, N.P. & Robertson, A.A.B.** 2000. Evaluation of liquid chromatography-atmospheric pressure chemical ionisation-mass spec-

Publications

- trometry for the identification and quantification of desulfoglucosinolates. *Phytochemical Analysis* **11**, 216-225. J
- Griffiths, D.W., Bain, H., Deighton, N., Robertson, G.W. & Dale, M.F.B.** 2000. Photo-induced synthesis of tomatidenol-based glycoalkaloids in *Solanum phureja* tubers. *Phytochemistry* **53**, 739-745. J
- Griffiths, D.W., Deighton, N. & Dale, M.F.B.** 2001. The synthesis of alpha-solanine in light-exposed tubers of long-day adapted *Solanum phureja*. *Proceedings of the BBSRC Natural Products Biology Workshop*, Warwick, May 2001. P
- Griffiths, D.W., Deighton, N., Birch, A.N.E., Patrian, B. & Stadler, E.** 2001. Identification of glucosinolates on the leaf surface of plants from the Cruciferae and other closely related species. *Phytochemistry* **57**, 693-700. J
- Griffiths, D.W., Robertson, G.W., Shepherd, T., Birch, A.N.E., Gordon, S.C. & Woodford, J.A.T.** 2000. A comparison of the composition of epicuticular wax from red raspberry (*Rubus idaeus* L.) and hawthorn (*Crataegus monogyna* Jacq.) flowers. *Phytochemistry* **55**, 111-116. J
- Gunstone, F.D.** (ed.). 2001. *Structured and Modified Lipids*. Marcel Dekker, New York, 547pp. R
- Gunstone, F.D.** 2000. Composition and properties of edible oils. In: Hamm, W. & Hamilton, R.J. (eds.). *Edible Oil Processing*. Sheffield Academic Press, Sheffield, 1-33. R
- Gunstone, F.D.** 2000. Feeding the multitude - where is tomorrow's equivalent of the five loaves and two fishes? *European Journal of Lipid Science and Technology* **102**, 426-432. J
- Gunstone, F.D.** 2000. Market Focus. *Lipid Technology Newsletter* **6**, 22-23, 46-47, 70-71, 94-95, 117-119, 141-143. O
- Gunstone, F.D.** 2000. Market Reports. *INFORM* **11**, 272-273, 396-397, 482-483, 599-600, 770-771, 868-869, 963-964, 1083-1085, 1213-1215, 1287-1289. O
- Gunstone, F.D.** 2000. Market Reports. *Lipid Technology* **12**, 24, 48, 72, 96, 120, 148. O
- Gunstone, F.D.** 2000. Market Reports. *Lipid Technology Newsletter* **6**, 24, 48, 72, 96, 120, 148. O
- Gunstone, F.D.** 2000. Oils and fats in Europe. *European Journal of Lipid Science and Technology* **102**, 389-390. J
- Gunstone, F.D.** 2000. Oils and fats in the market place. www.britanniafood.com. O
- Gunstone, F.D.** 2000. Research Highlights. *Lipid Technology* **12**, 17-20, 44-46, 66-69, 91-93, 116-118, 138-141. O
- Gunstone, F.D.** 2001. Chemical reactions of fatty acids with special reference to the carboxyl group. *European Journal of Lipid Science and Technology* **103**, 307-314. J
- Gunstone, F.D.** 2001. Conjugated linoleic acid. www.britanniafood.com. O
- Gunstone, F.D.** 2001. Market Focus. *Lipid Technology Newsletter* **7**, 22-23, 46-47, 67-71. O
- Gunstone, F.D.** 2001. Market Reports. *INFORM* **12**, 61-63, 141-145, 274-276, 511-515 (palm), 605-611 (soya), 737-740. O
- Gunstone, F.D.** 2001. Market Reports. *Lipid Technology* **13**, 24, 52, 76. O
- Gunstone, F.D.** 2001. Market Reports. *Lipid Technology Newsletter* **7**, 24, 48, 72. O
- Gunstone, F.D.** 2001. Minor oils, speciality oils, and super-refined oils. In: Gunstone, F.D. (ed.). *Structured and Modified Lipids*. Marcel Dekker, New York, 185-208. R
- Gunstone, F.D.** 2001. Oilseed crops with modified fatty acid composition. *Journal of Oleo Science* **50**, 269-279. J
- Gunstone, F.D.** 2001. Phospholipids. In: Gunstone, F.D. (ed.). *Structured and Modified Lipids*. Marcel Dekker, New York, 241-250. R
- Gunstone, F.D.** 2001. Political and nutritional influences on the tallow trade in oils and fats. In: Rossell, B. (ed.). *Animal Carcass Fats*. Leatherhead Food RA Publishing, Leatherhead, Surrey, 239-255. R
- Gunstone, F.D.** 2001. Procedures used for lipid modification. In: Gunstone, F.D. (ed.). *Structured and Modified Lipids*. Marcel Dekker, New York, 11-36. R
- Gunstone, F.D.** 2001. Research Highlights. *Lipid Technology* **13**, 17-20, 47-50, 71-74. O
- Gunstone, F.D.** 2001. Why are structured lipids and new lipid sources required? In: Gunstone, F.D. (ed.). *Structured and Modified Lipids*. Marcel Dekker, New York, 1-10. R
- Gunstone, F.D. & Firestone, D.** (eds.). 2000. *Scientia Gras, A Select History of Fat Science and Technology*. AOCS Press, Champaign, Illinois, U.S.A., 250. R
- Gunstone, F.D. & Hersløf, B.G.** (eds.). 2000. *Lipid Glossary 2*. Oily Press, Bridgwater, U.K., 250pp. R
- Gunstone, F.D. & Pollard, M.R.** 2001. Vegetable oils with fatty acid composition changed by plant breeding or by genetic modification. In: Gunstone, F.D. (ed.). *Structured and Modified Lipids*. Marcel Dekker, New York, 155-184. R
- Hackett, C.A., Wachira, F.N., Paul, S., Powell, W. & Waugh, R.** 2000. Construction of a genetic linkage map for *Camellia sinensis* (tea). *Heredity* **85**, 346-355. J
- Hallett, P.D. & Newson, T.A.** 2001. A simple fracture mechanics approach for assessing ductile crack growth in soil. *Soil Science Society of America Journal* **65**, 1083-1088. J
- Hallett, P.D., Baumgartl, T. & Young, I.M.** 2001. Sub-critical water repellency of aggregates under a range of soil management practices. *Soil Science Society of America Journal* **65**, 184-190. J
- Hallett, P.D., Czarnes, S., Baumgartl, T. & Young, I.M.** 2000. Tillage decreases the water repellency of structured soil. *ISTRÖ-2000, International Soil Tillage Research Organisation Conference*, Fort Worth, Texas, USA, June 2000. P
- Hallett, P.D., Nunan, N., Douglas, J. & Young, I.M.** 2001. So near, yet so far: soil water transport measurements are highly heterogeneous at millimetre resolution. *Canadian Soil Science Society Annual Meeting*, 2-5 August 2001, Guelph, Ontario, Canada. P
- Hallett, P.D., Ritz, K. & Wheatley, R.E.** 2001. Microbial derived water repellency in golf course soil. *International Turfgrass Society Research Journal* **9**, 518-524. J
- Hamilton, J.T.G. & Christie, W.W.** 2000. Mechanisms for ion formation during the electron impact-mass spectrometry of picolinyl ester and 4,4-dimethyloxazoline derivatives of fatty acids. *Chemistry and Physics of Lipids* **105**, 93-104. J

- Hancock, R.D. & Viola, R.** 2001. Potential of engineering the plant L-ascorbic acid (vitamin C) biosynthetic pathway into the yeast *Saccharomyces cerevisiae*. *Scottish Plant Cell and Molecular Biology Group Meeting*, Dundee, UK, 26 January 2001. P
- Hancock, R.D. & Viola, R.** 2001. The use of micro-organisms for L-AA production: current status and future prospects. *Applied Microbiology and Biotechnology* **56**, 567-576. J
- Hancock, R.D., Galpin, J. & Viola, R.** 2000. Synthesis of L-ascorbic acid by *Saccharomyces cerevisiae*. *FEMS Microbiology Letters* **186**, 245-250. J
- Handley, L.L.** 2000. $\delta^{15}\text{N}$ concepts and arithmetic. *Royal Irish Academy Proceedings*, 2000. P
- Handley, L.L.** 2001. $\delta^{15}\text{N}$ in plants and soils: the current state of knowledge. *Stable Isotopes Mass Spectrometry Users Group Meeting*, Glasgow, January 2001. P
- Handley, L.L., Johnston, A.M. & Scrimgeour, C.M.** 2000. New high resolution method for assessing soil N status on a field scale. *Stable Isotopes and Mass Spectrometry Users Group (SIMSUG)*, Glasgow, January 2001. P
- Handley, L.L., Johnston, A.M. & Scrimgeour, C.M.** 2000. New high resolution method for assessing soil N status on a field scale. *Society of Chemical Industries*, London, October 2000. P
- Handley, L.L., Wheatley, R.E., Johnston, A.M., Scrimgeour, C.M. & Hallett, P.D.** 2001. Development of $\delta^{15}\text{N}$ stratification of NO_3-N in soil profiles. *Rapid Communications in Mass Spectrometry* **15**, 1274-1278. J
- Hansen, M. & Forster, B.P.** 2000. Gametic embryogenesis. A retrospective and prospective view. *European COST Action 824 on Biotechnological approaches for utilization of gametic cells*; Bled, Slovenia. P
- Harding, K. & Millam, S.** 2000. Analysis of chromatin, nuclear DNA and organelle composition in somatic hybrids between *Solanum tuberosum* and *Solanum sanctae-rosae*. *Theoretical and Applied Genetics* **101**, 939-947. J
- Harrier, L.A., Forbes, P., Poole, B. & Millam, S.** 2000. Current developments and perspectives in biolistic transformation. *COST Action 8.38*, Santiago de Compostela, Spain, 18-20 May. P
- Harris, K., Ritz, K., Young, I.M., Gilligan, C. & Otten, W.** 2000. Mapping and quantifying pathogenic fungi through heterogeneous soil. *British Society of Soil Science, Eurosoil 2000*, University of Reading. P
- Harris, K., Young, I.M., Gilligan, C., Otten, W. & Ritz, K.** 2001. Effect of soil bulk density on growth and spatial organisation of pathogenic fungi. *Interactions in the Microbial World: 9th International Symposium on Microbial Ecology*, Amsterdam, August 2001. P
- Harris, N., Foster, J.M., Kumar, A., Davies, H.V., Gebhardt, C. & Wray, J.L.** 2000. Two cDNAs representing alleles of the nitrate reductase gene of potato (*Solanum tuberosum* L. cv. Desiree): sequence analysis, genomic organization and expression. *Journal of Experimental Botany* **51**, 1017-1026. J
- Haupt, S., Duncan, G.H., Holzberg, S. & Oparka, K.J.** 2001. Evidence for symplastic sieve-element unloading in sink leaves of barley. *Plant Physiology* **125**, 209-218. J
- Haupt, S., Oparka, K.J., Sauer, N. & Neumann, S.** 2001. Macromolecular trafficking between *Nicotiana tabacum* and the holoparasite *Cuscuta reflexa*. *Journal of Experimental Botany* **52**, 173-177. J
- Haupt, S., Santa Cruz, S., Chapman, S., Smolenska, L. & Oparka, K.J.** 2001. Analysis of mixed infections of TMV and PVX expressing different fluorescent reporter genes. *Abstract for the 'Plasmodesma 2001' Meeting*, Cape Town, South Africa, August 2001. P
- Hawes, C., Boevink, P. & Moore, I.** 2000. GFP in plants. In: Allen, V. (ed.). *Fluorescence Microscopy of Proteins: A Practical Approach*. IRI Press, 163-177. R
- Haynes, S., Darby, A.C., Douglas, A.E., Prosser, J.I., Webster, G., Daniell, T.J., Godfray, H.C. & Van Veen, F.** 2001. High throughput screening of insect microbial communities. *BES/EDGE & Royal Entomological Society Meetings*, 2001. P
- Hedley, P.E., Harrower, B.E., McQuade, C.M., Powell, W. & Machray, G.C.** 2000. Malting barley EST databases and transcription mapping. *Scottish Plant Molecular and Cell Biology Forum*, St Andrews, January 2000. P
- Hedley, P.E., Hein, I., Morris, W.L., Campbell, E., Birch, P.R.J. & Newton, A.C.** 2000. Characterisation of resistance pathways to *Rhynchosporium secalis* in barley using suppression subtractive hybridisation. *Proceedings of the 6th International Congress of Plant Molecular Biology*, Quebec, Canada, 22-36, 18-24 June 2000. P
- Hedley, P.E., Maddison, A.L., Davidson, D. & Machray, G.C.** 2000. Differential expression of invertase genes in internal and external phloem tissues of potato (*Solanum tuberosum* L.). *Journal of Experimental Botany* **51**, 817-821. J
- Heilbronn, T.D. (ed.)** 2000. *Scottish Society for Crop Research Newsletter*. March 2000, 8pp. O
- Heilbronn, T.D. (ed.)** 2000. *Thought for food: 50 years of plant improvement*. Scottish Crop Research Institute, Dundee, 28pp. O
- Higuchi, T., Watanabe, A., Bengough, A.G. & Iijima, M.** 2001. Border cells in soil-grown maize roots: a technique for their separation from soil particles. *International Society for Root Research*, 11-15 November 2001, Nagoya, Japan. P
- Hillman, J.R.** 2000. The entrepreneurial academic - exploiting knowledge and creating wealth. *Proceedings of the International Conference on Scientific and Technological Entrepreneurship in Universities and Research Institutes*; UNESCO, TWAS and COSTED-AraBN; Beirut, 11 November, 7-19. P
- Hilton, A.J., Linton, S.L. & Lees, A.K.** 2000. Characterisation, pathogenicity and genetic variation in isolates of *Rhizoctonia solani* AG3 from potato. *Proceedings of the Third International Symposium of Rhizoctonia*, Taichung, Taiwan, August 17-20, 2000. P
- Hilton, A.J., Linton, S.L., Nicolson, M.J., Stewart, H.E. & Lees, A.K.** 2000. Resistance to skin blemish diseases in potato. *Proceedings of the 2000 EAPR/EUCARPIA Potato Breeding Conference*, Warsaw, Poland, July 3-7, 2000. P
- Hilton, A.J., Stewart, H.E., Linton, S., Nicolson, M.J. & Lees** 2000. Testing the resistance to Silver scurf in commercial potato cultivars under controlled environmental conditions. *Potato Research* **43**, 263-272. J
- Hodge, A., Stewart, J., Robinson, D., Griffiths, B.S. & Fitter, A.H.** 2000. Plant N capture and microfaunal dynamics from decomposing grass and earthworm residues in soil. *Soil Biology and Biochemistry* **32**, 1763-1772. J

Publications

- Hodge, A., Stewart, J., Robinson, D., Griffiths, B.S. & Fitter, A.H.** 2000. Spatial and physical heterogeneity of N supply from soil does not influence N capture by two grass species. *Functional Ecology* **14**, 645-653. J
- Hodge, A., Stewart, J., Robinson, D., Griffiths, B.S. & Fitter, A.H.** 2000. Competition between roots and soil micro-organisms for nutrients from nitrogen-rich patches of varying complexity. *Journal of Ecology (Oxford)* **88**, 150-164. J
- Holeva, M., Avrova, A.O., Bell, K.S., Bryan, G.J., Parsons, R., Toth, I.K. & Birch, P.R.J.** 2000. A molecular study of the type III secretion system in the potato pathogen *Erwinia carotovora* subsp. *atroseptica*. *BSPP Presidential Meeting, Plant Pathogen Interactions*, Wye College, UK., p.30. P
- Holeva, R.C., Chen, Q., Neilson, R., Jones, J.T. & Brown, D.J.F.** 2000. Screening of selected lectins for attachment to *Paratrichodorus anemones* (Nematoda: Trichodoridae). *Association of Applied Biologists, Offered Papers in Nematology*, Linnean Society of London, 12 December 2000. P
- Horgan, G.W. & Young, I.M.** 2000. An empirical stochastic model for the geometry of two-dimensional crack growth in soil. *Geoderma* **96**, 263-276. J
- Humphris, S.N., Bruce, A. & Wheatley, R.E.** 2000. Volatile inhibition of *Serpula lacrymans* by *Trichoderma* spp. *Proceedings of 31st Meeting of International Research Group on Wood Preservation*, Hawaii, May 2000. P
- Humphris, S.N., Bruce, A. & Wheatley, R.E.** 2001. VOC mediated saprophyte/pathogen interactions. *Interactions in the Microbial World: 9th International Symposium on Microbial Ecology*, Amsterdam, August 2001. P
- Humphris, S.N., Wheatley, R.E. & Bruce, A.** 2001. The effects of specific volatile organic compounds produced by *Trichoderma* spp. on the growth of wood decay Basidiomycetes. *Holzforschung* **55**, 233-237. J
- Husmeier, D.** 2000. Bayesian regularization of hidden Markov models with an application to Bioinformatics. *Neural Network World* **10**, 589-595. J
- Husmeier, D.** 2000. The Bayesian evidence scheme for regularising probability - density estimating neural networks. *Neural Computation* **12**, 2685-2717. J
- Husmeier, D. & Wright, F.** 2000. Detecting recombination with hidden Markov models. *International Conference on Intelligent Systems for Molecular Biology (ISMB)*, La Jolla, August 2000. P
- Husmeier, D. & Wright, F.** 2000. Detecting sporadic recombination in DNA alignments with hidden Markov models. *Proceedings of the 15th German Conference on Bioinformatics*, Logos Verlag Berlin, 19-26. P
- Husmeier, D. & Wright, F.** 2000. Detection of recombination in phylogenetic data sets with hidden Markov models. *Mathematical and Statistical Aspects of Molecular Biology*, Newton Institute, Cambridge, April 4-5, 2000. P
- Hussain, S., Cooke, D.E.L., Lees, A.K., Duncan, J.M. & Gartland, K.M.A.** 2001. The development of *Phytophthora infestans* specific primers and their use in epidemiological studies. *British Society of Plant Pathology Meeting*, Wye College, September 2001. P
- Hyman, L.J., Birch, P.R.J., Dellagi, A., Avrova, A.O. & Toth, I.K.** 2000. The development of a quantitative PCR-based detection system for *Erwinia carotovora* subsp. *atroseptica* on potato tubers. *EPPO Conference on Diagnostic Techniques for Plant Pests*, Wageningen, The Netherlands, 1-4 February 2000. P
- Iannetta, P.P.M., Laarhoven, L.J., Davies, H.V. & Harren, F.** 2000. Ethylene production by strawberry flowers and ripening fruit. *Abstracts of the 9th International Workshop on LASER Based Photoacoustic Trace Gas Detection in Life Sciences*, University of Nijmegen, The Netherlands, 11-12 July 2000. P
- Iannetta, P.P.M., Laarhoven, L.J., Davies, H.V. & Harren, F.** 2000. Alexander Graham Bell and strawberry fruit ripening. *Minutes of the Scottish Society for Crop Research - Soft Fruit Committee*, Scottish Crop Research Institute, 24 October 2000. P
- Iannetta, P.P.M., Medina-Escobar, N., Ross, H.A., Souleyre, E., Hancock, R.D., Fairlie, J., Taylor, M.A. & Davies, H.V.** 2000. Enzymes of the TCA cycle expressed during strawberry fruit ripening. *Abstracts of the 4th International Strawberry Symposium*, Tampere, Finland, 9-14 July 2000. P
- Iannetta, P.P.M., Medina-Escobar, N., Ross, H.A., Souleyre, E., Taylor, M.A. & Davies, H.V.** 2000. Enzymes of the TCA cycle expressed in strawberry fruit during ripening. *The Scottish Cell and Molecular Biology Group*, St Andrews University, 28 January 2000. P
- Iannetta, P.P.M., Stewart, D. & Davies, H.V.** 2000. Strawberry fruit ripening and high-O₂ modified atmosphere packaging: potential applications of the photoacoustic-LASER facility. *Molecular and LASER Physics Department*, University of Nijmegen, The Netherlands, 9 February 2000. P
- Iannetta, P.P.M., Wyman, M., Neelam, A., Jones, C.S., Taylor, M.A., Davies, H.V. & Sexton, R.** 2000. A causal role for ethylene and endo-β-1,4-glucanase in the abscission of red-raspberry (*Rubus idaeus* L.) drupelets. *Physiologia Plantarum* **110**, 535-543. J
- Iannetta, P.P.M., Wyman, M., Neelam, A., Jones, C.S., Taylor, M.A., Davies, H.V. & Sexton, R.** 2000. Abscission endo-β-1,4-glucanase, ethylene and the machine harvesting of red raspberries. *Abstracts of the 10th Scottish Cell Wall Group Meeting*, Edinburgh University, 3-4 April 2000. P
- Ibrahim, A.F.M., Watters, J.A. & Brown, J.W.S.** 2001. Differential expression of potato U1A spliceosomal protein genes: a rapid method for expression profiling of multigene families. *Plant Molecular Biology* **45**, 449-460. J
- Ibrahim, A.F.M., Watters, J.A. & Brown, J.W.S.** 2001. Differential expression and promoter analyses of plant U1A and U2B" multigene families. *6th Annual Meeting of the RNA Society*, Banff, Canada, June 2001. P
- Ibrahim, A.F.M., Watters, J.A., Clark, G.P., Thomas, C.R.J., Brown, J.W.S. & Simpson, C.G.** 2000. Cryptic splicing for intron-containing GUS constructs. *Cell Engineering LINK Dissemination Meeting*, D.T.I., London, October 2000. P
- Ibrahim, A.F.M., Watters, J.A., Clark, G.P., Thomas, C.R.J., Brown, J.W.S. & Simpson, C.G.** 2001. Expression of intron-containing GUS constructs is reduced due to activation of a cryptic 5' splice site. *Molecular Genetics & Genomics* **265**, 455-460. J
- Iijima, M., Barlow, P.W. & Bengough, A.G.** 2000. Root cap structure and cell production rates of maize (*Zea mays* L.) root in mechanically impeded sand. *13th Meeting of Japanese Society of Root Research*, Japan, June 2000. P

- Iijima, M., Griffiths, B.S. & Bengough, A.G.** 2000. Sloughing of cap cells and carbon exudation from maize seedling roots in compacted sand. *New Phytologist* **145**, 477-482. J
- Isidore, E., Milbourne, D. & Waugh, R.** 1999. Construction and applications of a multifunctional ultra-high density genetic map of potato. *Scottish Plant Cell and Molecular Biology*, St Andrews, January 1999. P
- Isidore, E., van Os, H., Andrzejewski, J., Bakker, J., Bryan, G.J., Buntjer, J., Caromel, B., van Eck, H., Ghareeb, B., Lefebvre, V., Milbourne, D., Ritter, E., Rouppé van der Voort, J., Roussel-Bourgeois, F. & Waugh, R.** 2001. Calculation of ultra-high density genetic linkage maps of heterozygous outbreeders: a model study of chromosome I of potato. *Plant and Animal Genome IX*, San Diego, 2001. P
- Ivandic, V. & Forster, B.P.** 2000. Molecular markers for investigating germplasm adaptation in barley. *European Sigma n Meeting on New Horizons in Marker Technologies and their Application for Cereal Genomics*, Bologna, Italy. P
- Ivandic, V., Hackett, C.A., Nevo, E., Thomas, W.T.B. & Forster, B.P.** 2000. Identification of water stress tolerance in wild barley, *Hordeum spontaneum*. *Proceedings of the 8th International Barley Genetics Symposium, Barley Genetics VIII (III)*, Adelaide, 22-27 October 2000, 275-277. P
- Ivandic, V., Hackett, C.A., Zhang, Z.J., Staub, J.E., Nevo, E., Thomas, W.T.B. & Forster, B.P.** 2000. Phenotypic responses of wild barley to experimentally imposed water stress. *Journal of Experimental Botany* **51**, 2021-2029. J
- Jacobs, H., Boswell, G., Ritz, K., Gadd, G. & Davidson, F.A.** 2001. Fungal solubilization of metal phosphates under nutritionally-heterogeneous conditions. *Society for General Microbiology: 148th Ordinary Meeting*, Edinburgh, March 2001. P
- Jacobs, H., Boswell, G., Ritz, K., Gadd, G.M. & Davidson, F.A.** 2000. Solubilization of insoluble metal phosphates by *Rhizoctonia solani*. *2nd Euroconference on Bacterial-Metal/Radionuclide Interaction: Basic Research and Bioremediation*, Dresden, Germany. P
- Jacobs, H., Boswell, G., Ritz, K., Gadd, G.M. & Davidson, F.A.** 2001. Solubilization of metal phosphates by *Rhizoctonia solani*. *15th International Symposium on Environmental Biogeochemistry*, Wroclaw, September 2001. P
- Jacobs, H., Boswell, G., Ritz, K., Gadd, G.M. & Davidson, F.A.** 2001. Movement of carbon through fungal hyphae for solubilisation of metal phosphates. *American Society for Microbiology: 101st General Meeting*, Orlando, May 2001. P
- James, A., Thangavelu, M., Wei, F., Ramsay, L., Wise, R., Bryan, G.J., Dear, P. & Waugh, R.** 2001. Happy mapping in plants. *Plant and Animal Genome IX*, San Diego, Jan 2001. P
- Jennings, N., Squires, J., Taylor, M., Williamson, B., McNicol, R.J. & Graham, J.** 1999. Scottish Raspberry Development Programme. *HDC News* 1999. O
- Johnston, A.** 2001. Are CO₂ concentration and growth rate the primary factors controlling ¹³C discrimination in marine phytoplankton: *Emiliania huxleyi*, a case study? *Stable Isotopes Mass Spectrometry Users Group Meeting*, Glasgow, January 2001. P
- Jones, A.T.** 2000. Black currant reversion disease - the probable causal agent, eriophyid mite vectors, epidemiology and prospects for control. *Virus Research* **71**, 71-84. J
- Jones, A.T.** 2001. Fungal vectors. In: Maloy, O.C. & Murray, T.D. (eds.). *Encyclopedia of Plant Pathology*. John Wiley & Sons, 1161-1163. R
- Jones, A.T.** 2001. Virus transmission. In: Maloy, O.C. & Murray, T.D. (eds.). *Encyclopedia of Plant Pathology*. John Wiley & Sons, New York, 1153-1161. R
- Jones, A.T., McGavin, W.J. & Birch, A.N.E.** 2000. Effectiveness of resistance genes to the large raspberry aphid, *Amphorophora idaei* Börner, in different raspberry (*Rubus idaeus* L.) genotypes and under different environmental conditions. *Annals of Applied Biology* **136**, 107-113. J
- Jones, A.T., McGavin, W.J., Brunt, A.A. & Phillips, M.S.** 2000. *Elderberry latent virus*: its relationship to *Pelargonium ringspot virus* and its identification as a distinct member of the genus *Carmovirus*, family *Tombusviridae*. *Annals of Applied Biology* **136**, 147-152. J
- Jones, A.T., McGavin, W.J., Geering, A.D.W. & Lockhart, B.E.L.** 2001. A new Badnavirus in *Ribes* species, its detection by PCR, and its close association with Gooseberry vein banding disease. *Plant Disease* **85**, 417-422. J
- Jones, A.T., McGavin, W.J., Mayo, M.A., Angel-Diaz, J.E., Kärenlampi, S.O. & Kokko, H.** 2000. Comparison of some properties of two laboratory variants of *Raspberry bushy dwarf virus* (RBDV) with those of three previously characterised RBDV isolates. *European Journal of Plant Pathology* **106**, 623-632. J
- Jones, A.T., McGavin, W.J., Mayo, M.A., Angel-Diaz, J.E., Kärenlampi, S.O. & Kokko, H.** 2001. Some properties of variants of *Raspberry bushy dwarf virus*. *Acta Horticulturae* **551**, 27-32. J
- Jones, C.S., Davies, H.V. & Taylor, M.A.** 2000. Profiling of changes in gene expression during raspberry (*Rubus idaeus*) fruit ripening by application of RNA fingerprinting techniques. *Planta* **211**, 708-714. J
- Jones, E.R.L. & Newton, A.C.** 2000. *Rhynchosporium* of barley. *United Kingdom Cereal Pathogen Virulence Survey Annual Report for 1999*, 69-77. O
- Jones, J.T.** 2001. Parasites of crops: potatoes - *Globodera pallida*. In: Halton, D.W., Dehnke, J.M. & Marshall, I. (eds.). *Handbook of Practical Exercises in Parasitology*. Cambridge University Press, Cambridge, 63-72. R
- Jones, J.T., Blok, V.C., Popejus, H., Robertson, L., Prior, A., Phillips, M.S. & Smant, G.** 2000. Characterisation of secreted proteins of *Globodera rostochiensis*. *Abstracts of the 39th Annual Meeting of the Society of Nematologists*, Quebec, Canada, 2000. P
- Jones, J.T., Blok, V.C., Prior, A., Phillips, M.S., Popejus, H., Bakker, E., Helder, H. & Smant, G.** 2000. ESTs from potato cyst nematodes - from sequences to functional analysis. *Nematology* **2**, 765. P
- Jones, J.T., Robertson, L., Prior, A., Knox, D. & Phillips, M.S.** 2000. Antioxidant proteins of *Globodera rostochiensis*. *Nematology* **2**, 764. P
- Jones, J.T., Smant, G. & Blok, V.C.** 2000. SXP/RAL2 proteins of the potato cyst nematode *Globodera rostochiensis*: secreted proteins of the hypodermis and amphids. *Nematology* **2**, 887-893. J

Publications

- Karanastasi, E., Roberts, I.M., MacFarlane, S.A. & Brown, D.J.F. 2000. The location of specifically retained *Tobacco rattle virus* particles in the oesophageal tract of the vector *Paratrichodorus anemones*. *Russian Journal of Nematology* **8**, 91. J
- Karanastasi, E., Vassilakos, N., Roberts, I.M., MacFarlane, S.A. & Brown, D.J.F. 2000. Immunogold localization of *Tobacco rattle virus* particles within the virus-vector nematode *Paratrichodorus anemones*. *Journal of Nematology* **31**, 5-12. J
- Karanastasi, E., Vellios, V., Roberts, I.M., MacFarlane, S.A. & Brown, D.J.F. 2000. The application of safranin-O for staining virus-vector trichodoridae nematodes for electron and confocal laser scanning microscopy. *Nematology* **2**, 237-245. J
- Kempton, R.A., Durban, M.L., Ferris, S. & Currie, I.D. 2000. Fitting neighbour and trend effects to experimental data. *International Biometric Society, The XXth International Biometric Conference*, University of California at Berkeley, July 1-7, 2000 Vol I, 78. P
- Kilcoyne, S.H., Bentley, P.M., Thongbai, P., Gordon, D.C. & Goodman, B.A. 2000. The application of ^{57}Fe Mössbauer spectroscopy in the investigation of iron uptake and translocation in plants. *Nuclear Instruments and Methods B* **160**, 157-166. J
- Kiritsakis, A. & Christie, W.W. 2000. Analysis of edible oils. In: Harwood, J. & Aparicio, R. (eds.). *Handbook of Olive Oil: Analysis and Properties*. Aspen Publishers, Maryland, U.S.A., 129-158. R
- Krivtsov, V., Garside, A., Thompson, J., Bezginova, T., Salmond, R., Liddell, K., Griffiths, B.S., Staines, H., Watling, R. & Palfreyman, J.W. 2001. Interrelations between soil nematodes, bacteria, fungi and protozoa in the 'Dawyck cryptogamic sanctuary' in winter. *Russian Nematological Society*, Moscow, June 2001. P
- Krivtsov, V., Liddell, K., Salmond, R., Garside, A., Thompson, J., Bezginova, T., Griffiths, B.S., Staines, H., Watling, R. & Palfreyman, J.W. 2001. Analysis of microbial interactions in forest soil. *Journal of the Russian Nematological Society*, Moscow, June 2001. P
- Kuan, H.L., Fenwick, C., Griffiths, B.S., Ritz, K., Glover, A. & McCaig, A.E. 2000. Relationships between soil microbial diversity and community functioning following applied stresses. *British Society of Soil Science*, Reading, September 2000. P
- Kuan, H.L., Fenwick, C., Griffiths, B.S., Ritz, K., Glover, A. & McCaig, A.E. 2000. Soil microbial diversity and function under applied stresses. *Society for General Microbiology Meeting, Recent Advances in Molecular Microbial Ecology*, Galway, Ireland, April 2000. P
- Kumar, A. & Hirochika, H. 2001. Application of retrotransposons as genetic tools in plant biology. *Trends in Plant Science* **6**, 127-134. J
- Kumar, A., Groski, J., Holt, A., Wishart, J., Gray, L., Blok, V.C. & Phillips, M.S. 2000. Ty3-gypsy group of LTR retrotransposons in plant parasitic nematodes. *Nematology* **2**, 769. P
- Kumar, A., Phillips, M.S., Ernst, K., Sobczak, M. & Ganap, M. 2000. Characterisation and cloning of a wide spectrum nematode resistance gene (*Hero*) of tomato. *Abstract for the BSPP Meeting on Plant-Pathogen Interactions*, Wye College, UK, 33-34. P
- Kumar, P.L., Jones, A.T. & Reddy, D.V.R. 2000. Sterility mosaic. The green plague of pigeonpea. Breakthrough in identification of the causal agent and strategies for sustainable pigeonpea production. *Research Brief for ICRISAT GREP*. T
- Kumar, P.L., Jones, A.T., Sreenivasulu, P. & Reddy, D.V.R. 2000. Breakthrough in the identification of the causal virus of pigeonpea sterility mosaic disease. *Journal of Mycology and Plant Pathology* **30**, 249. J
- Kumar, P.L., Jones, A.T., Sreenivasulu, P., Fenton, B. & Reddy, D.V.R. 2001. Characterization of a virus from pigeonpea with affinities to species in the genus *Aureusvirus*, family *Tombusviridae*. *Plant Disease* **85**, 208-215. J
- Kumar, P.L., Reddy, D.V.R. & Jones, A.T. 2000. ELISA for the detection of pigeonpea sterility mosaic virus. Procedure Summary. ICRISAT Publication, Patancheru 502324, India. T
- Lacomme, C., Pogue, G.P., Wilson, T.M.A. & Santa Cruz, S. 2001. Plant viruses as gene expression vectors. In: Ring, C.J.A. & Blair, E.D. (eds.). *Genetically Engineered Viruses: Development and Applications*. BIOS Scientific Publishers Ltd, Oxford, 59-105. R
- Lagudah, E., Dubcovsky, J. & Powell, W. 2001. Wheat genomics. *Plant Physiology and Biochemistry* **39**, 1-10. Special Issue 'Plant Genomics'. J
- Lane, S. & Torrance, L. 2000. Application of scFv derived from a non-immunized phage display library to the detection of toxic microcystins. *Poster Abstracts Phage Display 2000*, Simon Fraser University, Vancouver, Canada, 2000. P
- Lee, L., Palukaitis, P. & Gray, S.M. 2000. The Potato leafroll virus 17kDa putative mutant protein is not required for systemic infection. *Phytopathology* **90**, S45-S46. P
- Lees, A.K. 2000. A comparison of methods for assessing resistance to powdery scab in potato. *Proceedings of the First EU Spongospora Workshop*, Aberdeen, July 2000. P
- Lees, A.K., Cullen, D.W. & Hilton, A.J. 2000. Development of a quantitative diagnostic tool for the detection of *R. solani* in potato tissue and soil. *Proceedings of the Third International Symposium of Rhizoctonia*, Taichung, Taiwan, August 2000. P
- Lees, A.K., DeMaine, M.J., Nicolson, M.J. & Bradshaw, J.E. 2000. Long-day-adapted *Solanum phureja* as a source of resistance to blackleg caused by *Erwinia carotovora* subsp. *atroseptica*. *Potato Research* **43**, 279-285. J
- Li, Q., Ryu, K.H. & Palukaitis, P. 2001. Cucumber mosaic virus plant interactions: identification of 3a protein sequences affecting infectivity, cell-to-cell movement and long-distance movement. *Molecular Plant-Microbe Interactions* **14**, 378-385. J
- Liolliopoulos, F., Cowan, G.H., Torrance, L. & Ziegler, A. 2000. Studies on the localization and function of the putative movement proteins of Potato mop-top virus. *Proceedings of the First European Powdery Scab Workshop*, Aberdeen, Scotland, July, 2000, 87-88. P
- Liu, H.T., Boulton, M.I., Oparka, K.J. & Davies, J.W. 2001. Interaction of the movement and coat proteins of Maize streak virus: implications for the transport of viral DNA. *Journal of General Virology* **82**, 35-44. J
- Liu, J. & Crawford, J.W. 2000. Sufficient conditions for coordination of a nonlinear biochemical system under external forcing. *Journal of Physical Chemistry B* **104**, 2623-2629. J

- Liu, J. & Torres, N.V.** 2000. Combined approach of NMR study and theoretical analysis for understanding citric acid production by *Aspergillus niger*. *VI International Symposium on Biochemical System Theory*, Tenerife, Spain. P
- Liu, J.** 2000. Dynamics and co-ordination of non-linear biochemical systems under fluctuations. In: Pandalai, S.G. (ed.). *Recent Research Developments in Biophysical Chemistry*. Transworld Research Network, Trivandrum, India, 85-104. R
- Liu, J.** 2000. Sufficient conditions for coordination of a forced biochemical system with the interplay of activation and inhibition. *Journal of Biological Systems* **8**, 237-253. J
- Long, J.D., Tipping, R., Carter, S., Davidson, D., Boag, B. & Tyler, A.** 2001. The replication of pollen stratigraphics in soil pollen profiles: a test. In: Harley, M.M., Morton, C.M. & Blackmore, S. (eds.). *Pollen and Spores: Morphology and Biology*. Royal Botanic Gardens, Kew, 481-497. R
- Luo, Z.W., Hackett, C.A., Bradshaw, J.E., McNicol, J.W. & Milbourne, D.** 2001. Construction of a genetic linkage map in tetraploid species using molecular markers. *Genetics* **157**, 1369-1385. J
- Lyngkjaer, M.F., Newton, A.C., Atzema, J.L. & Baker, S.J.** 2000. The barley *mlo*-gene, an important powdery mildew resistance source. *Agronomie: Plant Genetics and Breeding* **20**, 745-756. J
- Macaulay, M., Ramsay, L., Powell, W. & Waugh, R.** 2001. A representative, highly informative 'genotyping set' of barley SSRs. *Theoretical and Applied Genetics* **102**, 801-809. J
- MacFarlane, S.A.** 2000. The 16K cysteine-rich protein of *Tobacco rattle virus* PpK20 is required for virus multiplication. *Abstracts of the XIth International Congress of Virology*, Sydney, Australia, 1999, W56, 301. P
- MacFarlane, S.A. & Brown, E.C.** 2000. Is recovery from infection by TRV the result of gene silencing? *Abstracts of the ASV Meeting*, Fort Collins, Colorado, 2000 (P33-9), 180. P
- Mackay, G.R. & Todd, D.** 2000. A targeted and accelerated approach to breeding potatoes for processing. *Potato Research* **43** (Abstract of Joint Meeting of EUCARPIA and EAPR), Warsaw, Poland, 3-7 July 2000, 404. P
- Mackay, G.R.** 2000. The Potato. In: K. Jarvis (ed.). *Ecuador, Peru and Bolivia: The Backpacker's Manual*. Bradt Publications, 266. T
- MacKerron, D.K.L.** 2000. Fine tuning fertiliser. *Eyewitness* 12-13. O
- MacKerron, D.K.L.** 2000. Organic farming and science - response to cover article in Issue 47. *Elm Farm Research Centre Bulletin* **47**, 49. O
- MacKerron, D.K.L.** 2001. Management Advisory Package for Potatoes - An Illustrated Guide. (Distributed on CD), March 2001. T
- MacKerron, D.K.L. & Mackay, G.R.** 2000. The World Potato Congress. *Pesticide Outlook* **11**, 179-180. O
- MacKerron, D.K.L. & Young, M.W.** 2000. Variation in indicated nitrogen nutrification in a potato crop. *Abstracts of the Xth International Colloquium for the Optimization of Plant Nutrition, Plant Nutrition for the Next Millennium*, Cairo, 8-13 April 2000. P
- MacKerron, D.K.L., Karvonen, T. & Haverkort, A.J.** 2000. Towards the specification of a decision support system to optimise use of nitrogen and water in potatoes. *Abstracts of the Xth International Colloquium for the Optimization of Plant Nutrition: Plant Nutrition for the Next Millennium*, Cairo, April 8-13 2000. P
- MacKerron, D.K.L., Marshall, B., McNicol, J.W. & Tonberg, J.** 2000. Beta-testing version of the Management Advisory Package for Potatoes. (20 users), March 2000. T
- MacKerron, D.K.L., Marshall, B., McNicol, J.W. & Tonberg, J.** 2001. Management Advisory Package for Potatoes - Version 1.01. (Commercial), April 2001. T
- Mackie, A.E. & Wheatley, R.E.** 1999. Effects and incidence of volatile organic compound interactions between soil bacterial and fungal isolates. *Soil Biology & Biochemistry* **31**, 375-385. J
- Malloch, G., Fenton, B. & Goodrich, M.A.** 2001. Molecular genetic analysis of the raspberry beetles and other Byturidae (Coleoptera). *Insect Molecular Biology* **10**, 281-291. J
- Marshall, B. & Roberts, J.** (eds.). 2000. *Leaf Development and Canopy Growth*. Sheffield Academic Press, Sheffield, 317. R
- Marshall, B., Dunlop, G., Ramsay, G. & Squire, G.R.** 2000. Temperature-dependent germination traits in oilseed rape associated with 5'-anchored simple sequence repeat PCR polymorphisms. *Journal of Experimental Botany* **51**, 2075-2084. J
- Marshall, D.F., Cardle, L., Ramsay, L. & Biscoe, P.V.** 2001. Barley and potato bioinformatics at SCRI. *Proceedings of Plant and Animal Genome*, p.673. P
- Martens, H., Schulz, A., Roberts, A.G. & Oparka, K.J.** 2001. ER-Targeted GFP, expressed under the SUC2 promoter, stays in companion cells of source and transport phloem. *Abstract for the 'Plasmodesma 2001' Meeting*, Cape Town, South Africa, August 2001. P
- Masson, D., Glidewell, S.M., Möller, M., Mill, R.R., Williamson, B. & Bateman, R.M.** 2001. Non-destructive examination of herbarium material for taxonomic studies using NMR imaging. *Edinburgh Journal of Botany* **58**, 1-14. J
- May, S., Bradnam, K., Cardle, L., Cartinhour, S., Couchman, M., Davenport, G., Devos, K., Dicks, J., Gale, M., Huang, L., Marshall, D.F., McWilliam, H., Ougham, H., Trick, M. & Waugh, R.** 2000. UK CropNet 99 - the second phase. *Journal of Experimental Botany*, **51** (March Supplement), 22-23. P
- Mayo, M.A.** 2000. Book Review. *Quarterly Review of Biology* **75**, 458. R
- Mayo, M.A.** 2000. Constructing and writing the names of virus species - an editorial note. *Archives of Virology* **145**, 427-428. J
- Mayo, M.A.** 2001. Plant virus taxonomy - 2001. *Abstract of the Huitième Rencontres de Virologie Végétale*, Aussois, March 2001, p10. P
- Mayo, M.A.** 2001. Report of the 29th Meeting of the Executive Committee of the International Committee on Taxonomy of Viruses. *Archives of Virology* **146**, 1437-1439. J
- Mayo, M.A.** 2001. Waikavirus. In: Maloy, O.C. & Murray, T.D. (eds.). *Encyclopedia of Plant Pathology*. John Wiley & Sons, Inc, 1179-1180. R
- Mayo, M.A. & Brunt, A.A.** 2001. The current state of plant virus taxonomy. *Molecular Plant Pathology* **2**, 97-100. J

Publications

- Mayo, M.A. & Fauquet, C.M.** 2000. The current composition of ICTV. *Virology* **145**, 1497-1504. J
- Mayo, M.A. & Reavy, B.** 2001. Sequiviruses. In: Maloy, O.C. & Murray, T.D. (eds.). *Encyclopedia of Plant Pathology*. John Wiley & Sons, Inc., 899-900. R
- Mayo, M.A. & Van Regenmortel, M.H.V.** 2000. ICTV and the Virology Division News. *Archives of Virology* **145**, 1985-1988. J
- Mayo, M.A., Ryabov, E.V., Fraser, G. & Taliantsky, M.E.** 2000. Mechanical transmission of *Potato leafroll virus*. *Journal of General Virology* **81**, 2791-2795. J
- McCarter, J., Abad, P., Jones, J.T. & Bird, D.M.** 2000. Rapid gene discovery in plant parasitic nematodes via the use of Expressed Sequence Tags. *Nematology* **2**, 719-731. J
- McDonald, S., Gordon, S.C. & Begg, G.** 2000. Wingless Weevil Survey. *Ness Botanic Gardens Newsletter* 2000. O
- McDougall, G.J.** 2000. A comparison of proteins from the lignifying xylem of compression and non-compression wood of Sitka spruce reveals a differentially expressed laccase. *Journal of Experimental Botany* **51**, 1395-1401. J
- McDougall, G.J.** 2001. Cell-wall proteins are selectively insolubilised during formation of dehydrogenation polymers of coniferyl alcohol. *Phytochemistry* **57**, 157-163. J
- McDougall, G.J.** 2001. Cell-wall-associated peroxidases from the developing xylem of angiosperms and gymnosperms: monolignol oxidation. *Holzforschung* **55**, 246-249. J
- McGeachy, K.D. & Barker, H.** 2000. *Potato mop-top virus* RNA can move long distance in the absence of coat protein: evidence from resistant, transgenic plants. *Molecular Plant-Microbe Interactions* **13**, 125-128. J
- McGovern, H., Deeks, L., Hallett, P.D., Ritz, K. & Young, I.M.** 2000. A sterile environment for growing and monitoring micro-organisms under a range of soil matric potentials. *Soil Biology and Biochemistry* **33**, 689-691. J
- McGovern, H., Young, I.M., Griffiths, B.S., Ritz, K. & Hallett, P.D.** 2000. Structural resilience and fungi in disturbed and undisturbed systems. *British Society of Soil Science, Eurosoil 2000*, Reading, September 2000. P
- McKenzie, J.D., Black, K.D., Kelly, M.S., Newton, L.C., Handley, L.L., Scrimgeour, C.M., Raven, J.A. & Henderson, R.J.** 2000. Comparisons of fatty acid and stable isotope ratios in symbiotic and non-symbiotic brittle stars from Oban Bay, Scotland. *Journal of the Marine Biological Association of the United Kingdom* **80**, 311-320. O
- Meyer, R.C., Hackett, C.A., Forster, B.P., Russell, J.R., Handley, L.L., Nevo, E. & Powell, W.** 2000. Association of nuclear and chloroplast SSRs with adaptive characters in wild barley. *Proceedings of the 8th International Barley Genetics Symposium, Barley Genetics VIII (II)*, Adelaide, 22-27 October 2000, 41-43. P
- Meyer, R.C., Lawrence, P.E., Young, G.R., Thomas, W.T.B. & Powell, W.** 2000. SSRs and SNPs - diagnostic tools for barley yellow mosaic virus. *Proceedings of the 8th International Barley Genetics Symposium, Barley Genetics VIII (II)*, Adelaide, 22-27 October 2000, 144-146 P
- Meyer, R.C., Swanston, J.S., Young, G.R., Lawrence, P.E., Bertie, A., Ritchie, J., Wilson, A., Brosnan, J.M., Pearson, S., Bringhurst, T.A., Steele, G., Powell, W. & Thomas, W.T.B.** 2000. Genetic markers for spirit yield in whisky production. *Royal Highland Show*, Edinburgh, June 2000. P
- Meyer, R.C., Swanston, J.S., Young, G.R., Lawrence, P.E., Bertie, A., Ritchie, J., Wilson, A., Brosnan, J.M., Pearson, S., Bringhurst, T.A., Steele, G., Powell, W. & Thomas, W.T.B.** 2000. Genetic approaches to improving distilling quality in barley. *Proceedings of the 8th International Barley Genetics Symposium, Barley Genetics VIII (I)*, Adelaide, 22-27 October 2000, 107-114. P
- Meyer, R.C., Swanston, J.S., Young, G.R., Lawrence, P.E., Bertie, A., Powell, W. & Thomas, W.T.B.** 2001. A genome based approach to improving barley for the malting and distilling industries. *MAFF LINK*. MAFF, London. T
- Meyer, R.C., Swanston, J.S., Young, G.R., Lawrence, P.E., Bertie, A., Powell, W. & Thomas, W.T.B.** 2001. Improving barley for the malting and distilling industries. *Abstracts of the XVIth EUCARPIA Congress*, September 2001, Edinburgh. P
- Mill, R.R., Möller, M., Christie, F., Glidewell, S.M., Masson, D. & Williamson, B.** 2000. Morphology, anatomy and ontogeny of female cones in *Acmopyle pancheri* (Brongn. & Gris) Pilg. (Podocarpaceae). *Annals of Botany* **88**, 55-67. J
- Millam, S.** 2000. Strategies towards the application of microspore culture in potato (*Solanum tuberosum* L.). *Proceedings of COST 824, Gametic Embryogenesis in Dicotyledonous Plants, Biotechnological Approaches for the Utilisation of Gametic Cells*, Bled, Slovenia, 1-5 July 2000. P
- Millam, S. & Davie, P.** 2000. Somatic hybridisation between *Solanum tuberosum* and *Solanum phureja*. In: Nagata & Bajaj (eds.). *Biotechnology in Agriculture and Forestry*. Springer Verlag, Berlin, 264-273. R
- Molina-Cano, J.-L., Swanston, J.S. & Ullrich, S.E.** 2000. Genetic and environmental effects on malting and feed quality: a dynamic field of study. *Proceedings of the 8th International Barley Genetics Symposium, Barley Genetics VIII (I)*, Adelaide, 22-27 October 2000, 127-134. P
- Möller, M., Glidewell, S.M., Masson, D., Mill, R.R., Williamson, B., Cronk, Q.C.B. & Bateman, R.M.** 2000. NMR Imaging in botanical research. *28th Scottish Microscopy Symposium*, Moredun Research Institute, Penicuik, 2000. P
- Möller, M., Glidewell, S.M., Masson, D., Mill, R.R., Williamson, B., Cronk, Q.C.B. & Bateman, R.M.** 2000. NMR in botanical research. *Edinburgh Magnetic Resonance Forum*, University of Edinburgh, 2000. P
- Möller, M., Mill, R.R., Glidewell, S.M., Masson, D., Williamson, B. & Bateman, R.M.** 2000. Comparative biology of the pollination mechanisms in *Acmopyle pancheri* and *Phyllocladus hypophyllus* (Podocarpaceae s.l.). *Annals of Botany* **86**, 149-158. J
- Morrison, I.M., Cochrane, M.P., Cooper, A.M., Dale, M.F.B., Duffus, C.M., Ellis, R.P., Lynn, A., Mackay, G.R., Paterson, L.J., Prentice, R.D.M., Swanston, J.S. & Tiller, S.A.** 2001. Potato starches: variation in composition and properties between three genotypes grown at two different sites and in two different years. *Journal of the Science of Food and Agriculture* **81**, 319-328. J
- Muckenschabel, I., Deighton, N., Lyon, G.D., Goodman, B.A., Stewart, D. & Williamson, B.** 2000. Markers of oxidative stress associated with infection of French bean (*Phaseolus vulgaris*) by *Botrytis cinerea*. *Proceedings of the 12th International Botrytis Symposium*, Reims, France, July 2000. P

- Muckenschabel, I., Williamson, B., Goodman, B.A., Lyon, G.D., Stewart, D. & Deighton, N.** 2001. Markers for oxidative stress associated with soft rots in French beans (*Phaseolus vulgaris*) infected by *Botrytis cinerea*. *Planta* **212**, 376-381. J
- Naidu, R.A., Miller, J.S., Mayo, M.A., Wesley, S.V. & Reddy, A.S.** 2000. The nucleotide sequence of *Indian peanut clump virus* RNA 2: sequence comparisons among pecluviruses. *Archives of Virology* **145**, 1857-1866. J
- Navajas, M. & Fenton, B.** 2000. The application of molecular markers in the study of diversity in Acarology. *Experimental and Applied Acarology* **24**, 751-774. J
- Nechwatal, J., Schlenzig, A., Jung, T., Cooke, D.E.L., Duncan, J.M. & Oßwald, W.F.** 2001. A comparison of baiting, flotation and PCR techniques for the detection of *Phytophthora quercina* and *P. citricola* in soil samples from declining oak stands. *Forest Pathology* **31**, 85-97. J
- Neilson, P., Bingham, I.J. & Bengough, A.G.** 2000. Kinetics of carbon efflux from mechanically impeded maize roots. *SEB Meeting: Interactions in the Root Environment Meeting*, Rothamsted, April 2000. P
- Neilson, P., Bingham, I.J. & Bengough, A.G.** 2000. The kinetics of ^{14}C efflux from mechanically impeded maize roots. *Journal of Experimental Botany* **51**, 10. P
- Neilson, R. & Brown, D.J.F.** 2000. Natural abundances of $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ reveal potential differences in feeding strategy among populations of *Xiphinema diversicaudatum* (Nematoda: Longidoridae). *Proceedings of the 2nd International Meeting on Applications of Stable Isotope Techniques to Ecological Studies*, Braunschweig, Germany, 7-10th May 2000. P
- Neilson, R., Boag, B. & Smith, M.** 2000. Earthworm S^{13} and $S^{15}\text{N}$ analyses suggest that putative functional classification of earthworms are site specific and may also indicate habitat complexity. *Biology and Fertility of Soils* **32**, 1053-1061. J
- Neuhaus, J.M. & Boevink, P.** 2000. The green fluorescent protein (GFP) as a reporter in plant cells. In: Hawes, C.R. & Satiat-Jeunemaitre, B. (eds.). *Plant Cell Biology: A Practical Approach*. Oxford University Press, Oxford, 127-142. R
- Newton, A.C.** 1999. Take-all disease of cereals - regional perspective. In: Hornby, D. (ed.). *Experimental Agriculture*. 1999. T
- Newton, A.C.** 2000. Control of *Rhynchosporium secalis* infection, yield and quality in complex mixtures of winter barley cultivars. Airborne pathogens on cereals: population studies of airborne pathogens on cereals as means of improving strategies for disease control. *COST 817 Annual Report for 1999*, 72. O
- Newton, A.C. & Swanston, J.S.** 2000. Malting quality analyses in winter barley mixtures. *Scottish Society for Crop Research Newsletter* 2000. O
- Newton, A.C., Guy, D.C., Nadziak, J. & Gacek, E.S.** 2000. The effect of mildew inoculum pressure, germplasm selection and environment on barley cultivar mixtures. *Acta Phytopathologica et Entomologica Hungarica* **35**, 315. P
- Newton, A.C., Swanston, J.S. & Gacek, E.S.** 2000. Cultivar mixtures for improved disease resistance, yield and malting quality - prospects. *Proceedings of the 8th International Barley Genetics Symposium, Barley Genetics VIII (I)*, Adelaide, 22-27 October 2000, 115-117. P
- Nikolaev, Yu.A., Prosser, J.I. & Wheatley, R.E.** 2000. Regulation of *Pseudomonas fluorescens* adhesion to glass surface by its volatile compounds. *Russian Journal of Microbiology* **69**, 352-355. J
- Nikolova-Damyanova, B., Momchilova, S. & Christie, W.W.** 2000. Silver ion high-performance liquid chromatographic separation of conjugated linoleic acid isomers, and other fatty acids, after conversion to *p*-methoxyphenacyl derivatives. *Journal of High Resolution Chromatography* **23**, 348-352. J
- Nisbet, A.J., Mordue (Luntz), A.J., Mordue, W., Strang, R.H.C. & Woodford, J.A.T.** 2001. Effects of neem compounds on phytophagous, sucking insects. *Proceedings of The Science and Application of Neem*, Glasgow, April, 2001. P
- Noli, E., Borgo, L., Turuspekov, Y., Sanguinetti, M.C., Abugalieva, S., Waugh, R. & Tuberrosa, R.** 2000. Comparative analysis of genetic relationships of barley cultivars from Europe and Asia by means of AFLP and SSR analysis. *Proceedings of the 8th International Barley Genetics Symposium, Barley Genetics VIII (III)*, Adelaide, 22-27 October 2000, 144-145. P
- Noordwijk, M., Brouwer, G., Meijboom, F., Oliveira, M. & Bengough, A.G.** 2000. Trench profile techniques and core break methods. In: Smit, A.L., Bengough, A.G., Engels, C. & Van Noordwijk, M. (eds.). *Root Research: A Handbook of Methods*. Springer Verlag, 211-234. R
- Nunan, N., Ritz, K., Crabb, D., Wu, K., Young, I.M. & Crawford, J.W.** 2001. Quantification of the *in situ* distribution of soil bacteria by large-scale imaging of thin sections of undisturbed soil. *FEMS Microbiology Ecology* **37**, 67-77. J
- Nunan, N., Wu, K. & Ritz, K.** 2001. Geostatistical analysis of the *in situ* spatial distribution of soil bacteria at the microscale and the mesoscale. *Interactions in the Microbial World: 9th International Symposium on Microbial Ecology*, Amsterdam, August 2001. P
- Nunan, N., Wu, K., Ritz, K., Young, I.M. & Crawford, J.W.** 2000. Measuring the *in situ* spatial distribution of soil bacteria from the micro- to meso-scale. *Third European Conference on Geostatistics for Environmental Applications*, Avignon, France. P
- Nunan, N., Wu, K., Ritz, K., Young, I.M. & Crawford, J.W.** 2001. Measuring and modelling the *in situ* distribution of soil bacteria at the microscale. *Canadian Soil Science Society Annual Meeting*, 2-5 August 2001, Guelph, Ontario, Canada. P
- Nurkiyanova, K.M., Ryabov, E.V., Commandeur, U., Duncan, G.H., Canto, T., Gray, S.M., Mayo, M.A. & Taliinsky, M.E.** 2000. Tagging *Potato leafroll virus* with the jellyfish green fluorescent protein gene. *Journal of General Virology* **81**, 617-626. J
- Nurkiyanova, K.M., Ryabov, E.V., Kalinina, N.O., Fan, Y., Andreev, I., Fitzgerald, A.G., Palukaitis, P. & Taliinsky, M.E.** 2001. Umbravirus-encoded movement protein induces tubule formation on the surface of protoplasts and binds RNA incompletely and non-cooperatively. *Journal of General Virology* **82**, 2579-2588. J
- Nyvall, P., Pedersen, M. & Viola, R.** 1999. A novel starch synthase involved in floridean starch metabolism. *Proceedings of the 2nd European Phycological Society*, Montecatini Terme, Italy, September 1999. P
- Nyvall, P., Pedersen, M. & Viola, R.** 2001. Red algal starch metabolism. *Proceedings of the Brazilian Society of Biochemistry and Molecular Biology Meeting*, Caxambu, Minas Gerais, Brazil, 19-22 May 2001. P

Publications

- O'Callaghan, K.J., Stone, P.S., Hu, X., Griffiths, D.W., Davey, M.R. & Cocking, E.C. 2000. Effects of glucosinolates and flavonoids on colonization of the roots of *Brassica napus* by *Azirhizobium caulinodans* ORS571. *Applied and Environmental Microbiology* **66**, 2185-2191. J
- Oparka, K.J. 2000. Non-invasive imaging of plant tissues with the confocal laser scanning microscope. *Abstracts of the 26th Scottish Microscopy Symposium*, Edinburgh, Scotland, 2000, 5. P
- Oparka, K.J. & Roberts, A.G. 2001. A not so open-and-shut case. *Plant Physiology* **125**, 123-126. J
- Oparka, K.J. & Santa Cruz, S. 2000. The great escape: phloem transport and unloading of macromolecules. *Annual Review of Plant Physiology and Plant Molecular Biology* **51**, 323-347. J
- Otten, W., Gilligan, C., Hall, D., Harris, K., Ritz, K. & Young, I.M. 2000. Spread of fungi through soil: can soil physical conditions affect epidemics? *Annual Meeting of the Scottish Soil-Root Group*, MLURI, Aberdeen, UK. P
- Otten, W., Hall, D., Harris, K., Ritz, K., Young, I.M. & Gilligan, C. 2001. Soil physics, fungal epidemiology and the spread of *Rhizoctonia solani*. *New Phytologist* **151**, 459-468. J
- Pachepsky, E., Crawford, J.W., Bown, J. & Squire, G.R. 2001. Individual diversity, ecosystem dynamics. *Society for Mathematical Biology Meeting*, Hawaii, 2001. P
- Pachepsky, E., Crawford, J.W., Bown, J. & Squire, G.R. 2001. Towards a general theory of biodiversity - a question of time. *Nature* **410**, 923-926. J
- Palivan, C.G., Goodman, B.A. & Tomas, St. 2000. The copper coordination sphere in some bis(hydrazinotriazine) complexes with superoxide radical scavenging activity determined by EPR spectroscopy. *9th International Conference on Magnetic Resonance in Biological Systems*, Florence, Italy, 2000, 355. P
- Palukaitis, P. & Canto, T. 2000. Transgenic expression of CMV RNA1: resistance to CMV and synergy with TMV. *Abstracts of the EMBO Workshop, Plant Virus Invasion and Host Defence*, Kolymbari, Crete, Greece, 2000, 51. P
- Palukaitis, P. 2000. Bio-pharming and responsible risk management. In: *Proceedings 2000. International Symposium on Stress Responses in Biological Systems*, Chonnam National University, Kwangju, Korea, 32-34. P
- Palukaitis, P. 2000. Rewards and risks associated with transgenic plants expressing plant viral sequences. *2000 Spring Scientific Meeting and General Assembly of the Biochemical Society*, Republic of Korea, 90-92. P
- Palukaitis, P. 2000. Synergy of virus accumulation and pathology in transgenic plants expressing viral sequences. *The Biosafety Results of Field Tests of Genetically Modified Plants and Microorganisms - 5th International Symposium*, Braunschweig, 6-10 September, 1998, 197-202. P
- Palukaitis, P., Canto, T., McGeechy, K., Kaplan, I. & Barker, H. 2001. Synergy and interference in transgenic plants expressing viral sequences. *Proceedings of ESF-ÄIGM Workshop on Potential Environmental Impacts Associated with Virus-resistant Transgenic Plants*, Versailles, France, 5-6 June, 2001. P
- Pande, B., McLean, K., Bradshaw, J.E., Milbourne, D., Hackett, C.A., Stewart, H.E., Isidore, E., Bryan, G.J., McNicoll, J. & Waugh, R. 2001. QTL mapping in tetraploid potato. *Plant and Animal Genome IX*, San Diego, Jan 2001. P
- Pascual, E.C., Blank, I., Goodman, B.A. & Yeretzian, C. 2000. The detection and characterization of free radicals generated during the decomposition of solutions of the coffee flavour compound furfuryl mercaptan. *Proceedings of the 18th International Scientific Colloquium on Coffee*, Helsinki, 1999, 50-57. P
- Pascual, E.C., Goodman, B.A. & Yeretzian, C. 2000. An attempt to determine the oxidative stability of coffee using spin-trapping and EPR spectroscopy. *Nestlé R & D Report*. Nestlé. T
- Pascual, E.C., Goodman, B.A. & Yeretzian, C. 2000. Free radical generation during the roasting of coffee beans. *Nestlé R & D Report*. Nestlé No. RE-RD000041. T
- Pearce, S.R., Knox, M.R., Ellis, T.H.N., Flavell, A.J. & Kumar, A. 2000. Pea Ty1-copia group retrotransposon: transpositional activity and use as markers to study genetic diversity in *Pisum*. *Molecular & General Genetics* **263**, 898-907. J
- Peneva, V., Neilson, R., Boag, B. & Brown, D.J.F. 2000. Criconematidae (Nematoda) from oak forests in two nature reserves in Russia. *Systematic Parasitology* **46**, 191-201. J
- Pennanen, T., Caul, S., Daniell, T.J., Ritz, K. & Wheatley, R.E. 2001. Community-level responses of soil microbes to variations in quantity and quality of substrate inputs. *Interactions in the Microbial World: 9th International Symposium on Microbial Ecology*, Amsterdam, August 2001. P
- Perera, L., Russell, J.R., Provan, J. & Powell, W. 2000. Use of microsatellite markers to investigate levels of genetic differentiation and population genetic structure of coconut (*Cocos nucifera* L.). *Genome* **43**, 15-21. J
- Phillips, M.S., Elliot, M., McNicol, J.W. & Trudgill, D.L. 2000. The utility of a computer programme for the integrated control of potato cyst nematodes. *Abstracts of the 25th International Symposium of the European Society of Nematologists*, Israel, 2000. P
- Pillen, K., Binder, A., Kreuzkam, B., Ramsay, L., Waugh, R., Forster, J. & Leon, J. 2000. Mapping new EMBL-derived barley microsatellites and their use in differentiating German barley cultivars. *Theoretical and Applied Genetics* **101**, 652-660. J
- Platt, H.W., Plissey, E.S., Mackay, G.R., Adams, M., Hinkle, M.K. & MacDonald, E. 2000. Sustaining potato crop, land and industry health beyond the year 2000: current issues and future needs. *American Journal of Potato Research* **77**, 333-352. J
- Ploeg, A.T. & Phillips, M.S. 2000. The damage function and Pf/Pi relationships of *Meloidogyne incognita* on melon (*Cucumis melo*). *Abstracts of the 39th Annual Meeting of the Society of Nematologists*, Quebec, Canada, 2000. P
- Popeijus, H., Blok, V.C., Cardle, L., Bakker, E., Phillips, M.S., Helder, J., Smart, G. & Jones, J.T. 2000. Analysis of genes expressed in second stage juveniles of the potato cyst nematodes *Globodera rostochiensis* and *G. pallida* using the expressed sequence tag approach. *Nematology* **2**, 567-574. J
- Popeijus, H., Overmars, H., Jones, J.T., Blok, V.C., Goverse, A., Helder, J., Bakker, J., Schots, A. & Smart, G. 2000. Non-symbiotic degradation of plant cell walls by animals. *Nature* **406**, 36-37. J
- Porter, A.E.A., Griffiths, D.W., Robertson, G.W. & Sexton, R. 1999. Floral volatiles of the sweet pea, *Lathyrus odoratus*. *Phytochemistry* **51**, 211-214. J

- Prior, A.E., Jones, J.T., Blok, V.C., Beauchamp, J., McDermott, L., Cooper, A. & Kennedy, M.W.** 2001. A surface-associated retinol- and fatty acid-binding protein (GpLBP20) from the potato cyst nematode *Globodera pallida* - lipid binding activities, structural analysis and expression pattern. *Biochemical Journal* **356**, 387-394. J
- Provan, J., Powell, W. & Hollingsworth, P.M.** 2001. Chloroplast microsatellites: new tools for studies in plant ecology and evolution. *Trends in Ecology and Evolution* **16**, 142-147. J
- Qin, L., Prins, P., Jones, J.T., Popeijus, H., Bakker, J., Smant, G. & Helder, J.** 2000. GenEST, a powerful link between cDNA sequence data and gene expression profiles generated by cDNA-AFLP. *Nucleic Acids Research* **29**, 1616-1622. J
- Ragindran, R., Robinson, D.J., Doraiswamy, S. & Ganapathy, T.** 2001. Specific PCR primers for identification of *Indian cassava mosaic virus* from South India. *Abstracts of the 3rd International Geminivirus Symposium*, Norwich, UK, 24-28 July, 2001. P
- Rajasekaran, P., Ellis, R.P., Swanston, J.S. & Thomas, W.T.B.** 2000. Causes and control of endosperm exposure in malting barley. *Proceedings of the 8th International Barley Genetics Symposium, Barley Genetics VIII (II)*, Adelaide, 22-27 October 2000, 228-230. P
- Ramsay, G., Stewart, H.E., De Jong, W.S., Bradshaw, J.E. & Mackay, G.R.** 1999. Introgression of late blight resistance into *Solanum tuberosum*. Proceedings of the XV EUCARPIA Congress, Viterbo, Italy, 20-25 September, 1998. In: Scarascia Mugnozza, G.T., Porceddu, E. & Pagnotta, M.A. (eds.). *Genetics and Breeding for Crop Quality and Resistance*. Kluwer Academic Publishers, London, 25-32. R
- Ramsay, L., Macaulay, M., Ivanissevich, S.D., MacLean, K., Cardle, L., Fuller, J., Edwards, K.J., Tuveson, S., Morgante, M., Massari, A., Maestri, E., Marmiroli, N., Sjakste, T., Ganal, M., Powell, W. & Waugh, R.** 2000. A simple sequence repeat-based linkage map of barley. *Genetics* **156**, 1997-2005. J
- Raven, J.A. & Handley, L.L.** 2001. The source, and site of assimilation, of nitrogen in plants and their symbionts. Implications for the use of other resources in plant growth and for isotope discrimination. *Annals of Applied Biology* **63**, 173-182. J
- Raven, J.A., Walker, D.I., Jensen, K.R., Handley, L.L., Scrimgeour, C.M. & McInroy, S.G.** 2001. What fraction of the organic carbon in *Sacoglossans* is obtained from photosynthesis by keptoplastids? An investigation using the natural abundance of stable carbon isotopes. *Marine Biology* **138**, 537-545. J
- Reddy, D.V.R., Thirumala-Devi, K., Reddy, S.V. & Mayo, M.A.** 2001. Training Course Manual. ICRISAT, Patancheru 502324, India, 43pp. T
- Reddy, D.V.R., Thirumala-Devi, K., Reddy, S.V., Waliyar, F., Mayo, M.A., Devi, K.R., Ortiz, R. & Lenné, J.M.** 2000. Estimation of aflatoxin levels in selected foods and feeds in India; a step towards the assessment of risk to the health of humans and livestock. *Proceedings of FAO-CIRAD Workshop*, Montpellier, France, 11-14 December, 2000. P
- Ritz, K.** 2000. How soil fungi respond to environmental heterogeneity. *Structure and Function in Soil Microbiology Workshop*, Uppsala, Sweden, August 2000. P
- Ritz, K. & Griffiths, B.S.** 2000. Consequence of complexity: effects of soil biodiversity upon organic matter dynamics. *Structure and Function in Soil Microbiology Workshop*, Uppsala, Sweden, August 2000. P
- Ritz, K. & Griffiths, B.S.** 2000. Implications of soil biodiversity for sustainable organic matter management. In: Rees, R.M., Watson, C.A., Ball, B. & Campbell, C.D. (eds.). *Sustainable Management of Soil Organic Matter*. CABI Biosciences, Wallingford, 343-356. R
- Ritz, K. & Trudgill, D.L.** 1999. Utility of nematode community analysis as an integrated measure of the functional state of soils: perspectives and challenges. *Plant and Soil* **212**, 1-11. J
- Ritz, K., Atkinson, D., Bardgett, R.D., Campbell, C.D., Clegg, C.D., Davies, W.M., Elston, D.J., Edwards, S., Glover, A., Gollotte, A., Grayston, S.J., Griffith, G., Griffiths, B.S., Harrier, L., Hooker, J.E., Mawdsley, J.L., McCaig, A.E., McNicol, J.W., Millard, P., Prosser, J.I., Rodwell, J. & Wheatley, R.E.** 2000. Community-level relationships between vegetation and soil micro-organisms in UK upland grasslands: perspectives from the MICRONET Programme. *Eurosoil 2000, University of Reading*, September, 2000. P
- Ritz, K., Boag, B., Clegg, C.D., Gollotte, A., Glover, E.A., Grayston, S.J., Griffiths, B.S., McCaig, A.E., McNicol, J.W., Millard, P., Prosser, J.I. & Wheatley, R.E.** 2001. What's the scale? - spatial analysis of soil microbial communities under upland grassland. *2001: A Soil Odyssey; American Soil Ecology Society*, Georgia, May 2001. P
- Ritz, K., Boag, B., Clegg, C.D., Gollotte, A., Glover, E.A., Grayston, S.J., Griffiths, B.S., McCaig, A.E., McNicol, J.W., Millard, P., Prosser, J.I. & Wheatley, R.E.** 2001. Characterising spatial variation in microbial community structure in upland grasslands. *Interactions in the Microbial World: 9th International Symposium on Microbial Ecology*, Amsterdam, August 2001. P
- Ritz, K., Griffiths, B.S., Wheatley, R.E. & Clegg, C.D.** 2000. Who is on top?: elucidating the relationships between plant and microbial communities. *Structure and Function in Soil Microbiology Workshop*, Uppsala, Sweden, August 2000. P
- Robbins, R.T., Zheng, J. & Brown, D.J.F.** 2001. Observations on a *Xiphinema insigne* population with several males from Hangzhou, China. *Journal of Nematology* **32**, 253-257. J
- Robert, Y., Woodford, J.A.T. & Ducray-Bourdin, D.G.** 2000. Some epidemiological approaches to the control of aphid-borne virus diseases in seed potato crops in northern Europe. *Virus Research* **71**, 33-47. J
- Roberts, A.G.** 1999. Green fluorescent protein as a marker for plant virus movement studies. *Abstracts of the 25th Scottish Microscopy Symposium*, Dunblane, UK, 1999, 5. P
- Roberts, A.G., Boevink, P., Santa Cruz, S., Sauer, N. & Oparka, K.J.** 1999. Plasmodesmata and the sink-source transition - new insights. *Abstracts of the International Congress on Assimilate Transport and Partitioning*, Newcastle, Australia, 1999, 121. P
- Roberts, A.G., Boevink, P., Santa Cruz, S., Sauer, N. & Oparka, K.J.** 2000. Using GFP to study the plasmodesmatal size exclusion limit in sink and source tissues. *Abstracts of the Annual SEB Meeting*, Exeter, UK, 2000. P
- Roberts, A.G., Boevink, P., Santa Cruz, S., Sauer, N. & Oparka, K.J.** 2000. Functional dynamics in sink-source transition leaves. *Abstracts of the 26th Scottish Microscopy Symposium*, Edinburgh, UK, 2000, 6. P

Publications

- Roberts, A.G., Boevink, P., Santa Cruz, S., Sauer, N. & Opara, K.J.** 2000. A study of plasmodesmata during the sink-source transition: GFP labelling reveals dynamic changes in architecture and function. *Abstracts of the ICHC*, York, UK, 2000, 45. P
- Roberts, I.M., Boevink, P., Roberts, A.G., Sauer, N., Reichel, C. & Opara, K.J.** 2001. Dynamic changes in the frequency and architecture of plasmodesmata during the sink-source transition in tobacco leaves. *Abstract for the 'Plasmodesma 2001' Meeting*, Cape Town, South Africa, August 2001. P
- Robertson, L., Robertson, W.M., Sobczak, M., Bakker, J., Tetaud, E., Ferguson, M.A.J., Fairlamb, A.H. & Jones, J.T.** 2000. Cloning expression and functional characterisation of a thioredoxin peroxidase from the potato cyst nematode *Globodera rostochiensis*. *Molecular and Biochemical Parasitology* **111**, 41-49. J
- Robinson, D., Handley, L.L., Scrimgeour, C.M., Gordon, D.C., Forster, B.P. & Ellis, R.P.** 2000. Using stable isotope natural abundances ($\delta^{15}\text{N}$ and $\delta^{13}\text{C}$) to integrate the stress responses of wild barley (*Hordeum spontaneum* C. Koch.) genotypes. *Journal of Experimental Botany* **51**, 41-50. J
- Robinson, D.J.** 2000. Plant viruses: soil-borne. *Embryonic Encyclopedia of Life Sciences*. Nature Publishing Group, London, <http://www.els.net>. R
- Robinson, D.J.** 2001. Tobraviruses. In: Maloy, O.C. & Murray, T.D. (eds.). *Encyclopedia of Plant Pathology*. John Wiley & Son, 1028-1029. R
- Robinson, D.J.** 2001. Umbraviruses. In: Maloy, O.C. & Murray, T.D. (eds.). *Encyclopedia of Plant Pathology*. John Wiley & Son, 1055-1057. R
- Russell, J.R., Ellis, R.P., Thomas, W.T.B., Waugh, R., Provan, J., Booth, A., Fuller, J., Lawrence, P.E., Young, G.R. & Powell, W.** 2000. A retrospective analysis of spring barley germplasm development from 'foundation genotypes' to currently successful cultivars. *Molecular Breeding* **6**, 553-568. J
- Russell, J.R., Marshall, D.F., Griffin, R., Harbard, J. & Powell, W.** 2001. Gene flow in South American *Eucalyptus grandis* and *Eucalyptus globulus* seed orchards. *Developing the Eucalypt of the Future*, Chile, 12-15 September 2001. P
- Ryabov, E.V., Fraser, G., Mayo, M.A., Barker, H. & Taliinsky, M.E.** 2001. Umbravirus gene expression helps *Potato leafroll virus* to invade mesophyll tissues and to be transmitted mechanically between plants. *Virology* **286**, 363-372. J
- Sanz, A.I., Fraile, A., Garcia-Arenal, F., Zhou, X., Robinson, D.J., Khalid, S., Butt, T. & Harrison, B.D.** 2000. Multiple infection, recombination and genome relationships among begomovirus isolates found in cotton and other plants in Pakistan. *Journal of General Virology* **81**, 1839-1849. J
- Sasaya, T., Torrance, L., Cowan, G.H. & Ziegler, A.** 2000. Aphid transmission studies using the *Potato virus Y* helper component proteins expressed from a *Potato virus X* vector. *Journal of General Virology* **81**, 1115-1119. J
- Saunders, J. & Errampalli, D.** 2000. Detection of *Helminthosporium solani*, the causal agent of silver scurf of potato, with PCR. *Canadian Journal of Plant Pathology* **22**, 174-174. J
- Scheurer, K., Huth, W., Habekuss, A., Waugh, R., Freidl, W. & Ordon, F.** 2000. Genetic analysis of tolerance against a German isolate of BYDV-PAV in barley (*H. vulgare* L.). *Proceedings of the 8th International Barley Genetics Symposium, Barley Genetics VIII (III)*, Adelaide, 22-27 October, 169-173. P
- Schmidt, O. & Scrimgeour, C.M.** 2001. A simple urea leaf-feeding method for the production of ^{13}C and ^{15}N labelled plant material. *Plant and Soil* **229**, 197-202. J
- Schuette, R., Goodman, B.A. & Stucki, J.W.** 2000. Magnetic properties of oxidized and reduced smectites. *Physics and Chemistry of Minerals* **27**, 251-257. J
- Scott, S.W., Zimmerman, M.T., Jones, A.T. & Le Gall, O.** 2000. Differences between the coat protein amino acid sequences of English and Scottish serotypes of *Raspberry ringspot virus* exposed on the surface of virus particles. *Virus Research* **68**, 119-126. J
- Scotti, I., Magni, R., Fink, W., Powell, W., Binelli, G. & Hedley, P.E.** 2000. Microsatellite repeats are not randomly distributed within Norway spruce (*Picea abies* K) expressed sequences. *Genome* **43**, 41-46. J
- Scrimgeour, C.M., MacVean, A., Fernie, C.E., Sebedio, J.L. & Riemersma, R.A.** 2001. Dietary *trans* α -linolenic acid does not inhibit Delta-5- and Delta-6-desaturation of linoleic acid in man. *European Journal of Lipid Science and Technology* **103**, 341-349. J
- Sebedio, J.L., Vermunt, S.H.F., Chardigny, J.M., Beaufre, B., Mensink, R.P., Armstrong, R.A., Christie, W.W., Niemela, J. & Henon, G.** 2000. The effect of dietary *trans* α -linolenic acid on plasma lipids and platelet fatty acid composition: the TransLinE study. *European Journal of Clinical Nutrition* **54**, 104-113. J
- Simpson, C.G., Clark, G.P., McQuade, C.M., Watters, J.A., Hedley, P.E., Machray, G.C. & Brown, J.W.S.** 2000. Splicing of a mini-exon from potato invertase pre-mRNAs. *Scottish Plant Molecular and Cell Biology Forum*, St. Andrews, January, 2000. P
- Simpson, C.G., Clark, G.P., Watters, J.A., Thow, G. & Brown, J.W.S.** 2000. Sequence elements required for invertase mini-exon splicing. *5th Annual Meeting of the RNA Society*, Madison, USA, 30 May-4 June 2000. P
- Simpson, C.G., Hedley, P.E., McQuade, C.M., Watters, J.A., Clark, G.P., Machray, G.C. & Brown, J.W.S.** 2000. Splicing of a mini-exon from potato invertase pre-mRNAs. *6th UK RNA Processing Workshop*, Rydal Hall, Cumbria, 21-23 January 2000, p. 21. P
- Simpson, C.G., Hedley, P.E., Watters, J.A., Clark, G.P., McQuade, C., Machray, G.C. & Brown, J.W.S.** 2000. Requirements for mini-exon inclusion in potato invertase mRNAs provides evidence for exon-scanning interactions in plants. *RNA* **6**, 422-433. J
- Smit, A.L., Bengough, A.G., Engels, C., Van Noordwijk, M., Pellerin, S. & van de Geijn, S.** (eds.). 2000. *Root Research: A Handbook of Methods*. Springer Verlag, Heidelberg, 587. R
- Solomon-Blackburn, R.M. & Barker, H.** 2001. A review of host major-gene resistance to potato viruses X, Y, A and V in potato: genes, genetics and mapped locations. *Heredity* **86**, 8-16. J
- Solomon-Blackburn, R.M. & Barker, H.** 2001. Breeding virus resistant potatoes (*Solanum tuberosum*): a review of traditional and molecular approaches. *Heredity* **86**, 17-35. J

- Soranzo, N., Alia, R., Provan, J. & Powell, W.** 2000. Postglacial history of European *Pinus sylvestris* populations revealed by patterns of mitochondrial variation at sequence-tagged-site loci. *Molecular Ecology* **9**, 1205-1211. J
- Souleyre, E., Iannetta, P.P.M., Duncan, G. & Davies, H.V.** 2000. Starch synthesis in strawberry fruit. *Abstracts of the Society for Experimental Biology Annual Main Meeting*, Exeter University, UK, 27-31 March 2000. P
- Squire, G.R.** 2000. Plant and canopy diversity. In: Marshall, B. & Roberts, J.A. (eds.). *Leaf Development and Canopy Growth*. Sheffield Academic Press, 280-309. R
- Squire, G.R.** 2000. Spread of transgenic plant propagules. *European Science Foundation Workshop on the Wider Environmental Implications of Genetically Modified Plants*, Moller Centre, Churchill College, Cambridge. P
- Squire, G.R., Marshall, B., Ramsay, G., Thompson, C. & McNicol, J.W.** 2000. Extrapolating beyond experimental boundaries in GM crop assessment. *Royal Statistical Society Meeting*, October 2000. P
- Squires, J.N., Daniell, T.J., Clegg, C.D., Griffiths, B.S., Ritz, K., Verrall, S. & Wheatley, R.E.** 2001. Effects of plants on diversity of nitrite-reducing bacteria in an upland grassland. *Molecular Microbial Ecology Group*, York, 2001. P
- Stewart, D.** 2001. Effect of high O₂ and N₂ atmospheres on strawberry quality. *Controlled Atmospheres 2001*, Rotterdam, 8-13 July 2001. P
- Stewart, D., Burford, N., Jabs, W., Hoeck, W. & Rowan, M.** 1999. Development of a new coated membrane textile using natural plant fibres. *Proceedings of the Natural Fibres Performance Forum*, Copenhagen, 21-22 May 1999, 89-96. P
- Stewart, D., Deighton, N. & Davies, H.V.** 2000. Contribution of cell wall-bound compounds to the antioxidant capacity of soft fruit. *Abstracts of the NEODIET Conference - Nutritional Enhancement of Plant Foods*, John Innes Centre, Norwich, 6-9 September 2000, p. 28. P
- Stewart, D., Iannetta, P.P.M. & Davies, H.V.** 2000. Smart fruit packing. *The Grower* June, 14-16. O
- Stewart, D., Iannetta, P.P.M. & Davies, H.V.** 2001. Ripening-related changes in raspberry cell wall composition and structure. *Phytochemistry* **56**, 423-428. J
- Stewart, H.E. & Bradshaw, J.E.** 2001. Comparison of the level of field resistance of progeny with and without a major gene for resistance to *Phytophthora infestans*. *Report of the Pathology Section Meeting of the European Association for Potato Research*. P
- Stuart, T. & Stewart, D.** 2001. Factors affecting the use of dimethylol ethylene urea (DMEU) as a cross-linking agent in the textile industry. *Cellulose Chemistry and Technology* **35**, 1-7. J
- Stuart, T., Crangle, A., Wilson, R. & Stewart, D.** 2001. Cross-linking of cellulose fibres. A model study using dimethylol ethylene urea (DMEU). *Cellulose Chemistry and Technology* **35**, 28-39. J
- Swanson, J.S. & Molina-Cano, J.L.** 2001. Beta-amylase activity and thermostability in two mutants derived from the malting barley cv. Triumph. *Journal of Cereal Science* **33**, 155-161. J
- Swanson, J.S. & Newton, A.C.** 2001. A cereal variety mixture - what's in it? *16th EUCARPIA Congress Abstracts*, Edinburgh. P
- Swanson, J.S., Ellis, R.P., Morrison, I.M., Mackay, G.R., Dale, M.F.B., Cooper, A.M., Tiller, S.A., Duffus, C.M., Cochrane, M.P., Prentice, R.D.M., Paterson, L. & Lynn, A.** 2001. Combining high amylose and waxy starch mutations in barley. *Journal of the Science of Food and Agriculture* **81**, 594-603. J
- Swanson, J.S., Thomas, W.T.B., Powell, W., Meyer, R.C., Bringhurst, T.A., Pearson, S.Y., Brosnan, J.M. & Broadhead, A.** 2000. Assessment of spirit yield in barley breeding lines. *Journal of the Institute of Brewing* **106**, 53-58. J
- Taliantsky, M.E., Nurkiyanova, K.M., Palukaitis, P., Fan, Y. & Fitzgerald, A.G.** 2000. Probing biomolecular transport complexes of two plant viruses with atomic force microscopy. *2nd International Conference on Scanning Probe Microscopy in Biomaterials Science*, Bristol, UK, 2000, 36. P
- Taliantsky, M.E., Ryabov, E.V., Kalinina, N.O., Robinson, D.J., Roberts, I.M. & Oparka, K.J.** 2001. Umbravirus ORF3-encoded protein is a multifunctional RNA-binding protein that both stabilizes viral RNA and mediates its systemic movement. *Abstract for American Society of Virology Meeting*, Madison, Wisconsin, USA, 2001. P
- Taliantsky, M.E., Ryabov, E.V., Robinson, D.J., Mayo, M.A. & Barker, H.** 2000. Movement functions of umbraviruses. *Abstracts of EMBO Workshop*, Kolymbari, Crete, Greece, 2000, 29. P
- Taylor, M.A., Ross, H.A., McRae, D., Stewart, D., Roberts, I.M., Duncan, G., Wright, F., Millam, S. & Davies, H.V.** 2000. A potato alpha-glucosidase gene encodes a glycoprotein possessing alpha-glucosidase II-like activity. Demonstration of enzyme activity and effects of down-regulation in transgenic plants. *The Plant Journal* **24**, 305-316. J
- Taylor, M.A., Ross, H.A., McRae, D., Wright, F., Viola, R. & Davies, H.V.** 2001. Copy cDNA cloning and characterisation of a potato alpha-glucosidase: expression in *E. coli* and effects of down-regulation in potato. *Planta* **213**, 258-264. J
- Thirumala-Devi, K., Mayo, M.A., Reddy, G., Reddy, S.V. & Reddy, D.V.R.** 2000. Immunodiagnostics for the estimation of aflatoxins and ochratoxin A in foods and feeds. *Abstracts of International Conference on Microbial Biotechnology, Trade and Public Policy*, Osmania University, Hyderabad, 15-17 July, 2000. P
- Thirumala-Devi, K., Mayo, M.A., Reddy, G., Reddy, S.V. & Reddy, D.V.R.** 2000. Advances in immunological methods for quantitative estimation of mycotoxins. *International Conference on Microbial Biotechnology, Trade and Public Policy*, Department of Microbiology, Osmania University, Hyderabad, India, 15-17 July, 2000. P
- Thirumala-Devi, K., Mayo, M.A., Reddy, G., Reddy, S.V. & Reddy, D.V.R.** 2000. Recent advances in mycotoxin diagnostics. In: Chandrashekhar, A., Bandyopadhyay, R. & Hall, A.J. (eds.). *Technical and Institutional Options for Sorghum Grain Mould Management: Proceedings of an International Consultation*. ICRISAT, Patancheru, India, 116-123. R
- Thirumala-Devi, K., Mayo, M.A., Reddy, G., Reddy, S.V., Delfosse, P. & Reddy, D.V.R.** 2000. Production of polyclonal antibodies against ochratoxin A and its detection in chilies by ELISA. *Journal of Agricultural Food Chemistry* **48**, 5079-5082. J
- Thirumala-Devi, K., Miller, J.S., Reddy, G. & Mayo, M.A.** 2001. Phage-displayed peptides that mimic aflatoxin B1 in serological reactivity. *Journal of Applied Microbiology* **90**, 330-336. J

Publications

- Thomas, W.T.B., Newton, A.C., Wilson, A., Meyer, R.C., Young, G.R. & Lawrence, P.E.** 2001. QTLs for disease resistance mapped in Derkado x B83-12/21/5. *Proceedings of the 8th International Barley Genetics Symposium, Barley Genetics VIII (II)*, Adelaide, 22-27 October, 186-188. P
- Thongbai, P. & Goodman, B.A.** 2000. Free radical generation and post-anoxic injury in rice grown in an iron-toxic soil. *Journal of Plant Physiology* **23**, 1887-1900. J
- Toojinda, T., Broers, L.H., Chen, X.M., Hayes, P.M., Kleinhofs, A., Korte, J., Kudrna, D., Leung, H., Line, R.F., Powell, W., Ramsay, L., Vivar, H. & Waugh, R.** 2000. Mapping quantitative and qualitative disease resistance genes in a doubled haploid population of barley (*Hordeum vulgare*). *Theoretical and Applied Genetics* **101**, 580-589. J
- Torrance, L.** 2000. Novel antibody technology and its application to the detection of cyanobacterial toxins. *Biological Science Reviews*. O
- Toth, I.K.** 2000. Blackleg and soft rot - prevention by prediction. *Interim Report to the British Potato Council* 2000. O
- Toth, I.K.** 2000. Tackling diseases at source. *Eye Witness* 2000. O
- Toth, I.K., Avrova, A.O. & Hyman, L.J.** 2001. Rapid identification and differentiation of the soft rot erwinias using 16S-23S intergenic transcribed spacers (ITS) - PCR and RFLP. *Applied and Environmental Microbiology* **67**, 4070-4076. J
- Toth, I.K., Birch, P.R.J., Dellagi, A., Bell, K.S., Avrova, A.O., Waugh, R., Bryan, G.J. & De Jong, W.** 2000. Novel approaches to study the pathogenicity and host range of *Erwinia carotovora*. *Departamento de Biotechnología. E.T.S. Ingenieros Agrónomos Ciudad Universitaria*, Madrid, Spain, June 2000. P
- Toth, I.K., Birch, P.R.J., Dellagi, A., Bell, K.S., Avrova, A.O., Waugh, R., Bryan, G.J. & De Jong, W.** 2000. Isolation of differentially expressed genes from *Erwinia carotovora* and physical mapping using BAC libraries. *ICPPB 2000*, Prince Edward Island, Canada, July 2000. P
- Toth, I.K., Birch, P.R.J., Dellagi, A., Bell, K.S., Avrova, A.O., Waugh, R., Bryan, G.J. & De Jong, W.** 2000. Novel approaches to study the pathogenicity and host range of *Erwinia carotovora*. *South African Sugar Association*, Durban, South Africa. P
- Toth, I.K., Birch, P.R.J., Dellagi, A., Bell, K.S., Avrova, A.O., Waugh, R., Bryan, G.J. & De Jong, W.** 2000. Novel approaches to study the pathogenicity and host range of *Erwinia carotovora*. *BioY2K Conference*, Grahamstown, South Africa. P
- Toth, I.K., Birch, P.R.J., Dellagi, A., Bell, K.S., Avrova, A.O., Waugh, R., Bryan, G.J. & De Jong, W.** 2000. Understanding the pathogenicity and host range of *Erwinia carotovora* through structural and functional genomics. *Crop Production in Cool Long Days*, Edinburgh, August 2000. P
- Toth, I.K., Cullen, D. & Lees, A.** 2000. Molecular diagnostics and potato storage diseases. *Agriculture Link Newsletter for the Agriculture and Horticulture Industries* 2000. O
- Toth, I.K., Holeva, M., Bell, K.S., Avrova, A.O., Dellagi, A., Waugh, R., De Jong, W., Bryan, G.J. & Birch, P.R.J.** 2000. Unravelling the molecular mechanisms of pathogenicity in the soft rot pathogen *Erwinia carotovora*: a new approach. *BSPP Presidential Meeting, Plant Pathogen Interactions*, Wye College, UK, 7. P
- Toth, R.L., Pogue, G.P. & Chapman, S.** 2001. Improvement of the movement properties of a plant virus vector through mutagenesis and DNA shuffling. *Abstract for 'Plasmodesma 2001' Meeting*, Cape Town, South Africa, August 2001. P
- Trognitz, B.R., Bonierbale, M., Landeo, J.A., Forbes, G., Bradshaw, J.E., Mackay, G.R., Waugh, R., Huarte, M.A. & Colon, L.** 2001. Improving potato resistance to disease under the Global Initiative on Late Blight. In: Cooper, H.D., Spillane, C. & Hodgkin, T. (eds.). *Broadening the Genetic Base of Crop Production*. CABI/FAO/IPGRI, 385-398. R
- Trudgill, D.L.** 2000. The etiology of root-knot nematode (*Meloidogyne* spp.) damage and its suppression with *Pasteuria penetrans*. *Abstracts of the XXXII Annual Meeting of the Organization of Nematologists of Tropical America*, Alabama, USA, 2000, 67. P
- Trudgill, D.L.** 2001. Parthenogenetic root-knot nematodes: exceptionally successful and damaging biotrophic root pathogens. *Annual Review of Phytopathology* **39**, 53-77. J
- Trudgill, D.L., Bala, G., Blok, V.C., Daudi, A., Davies, K.G., Gowen, S.R., Fargette, M., Madulu, J.D., Mateille, T., Mwageni, W., Netscher, C., Phillips, M.S., Sawadogo, A., Trivino, C. & Voyoukalou, E.** 2000. The importance of tropical root-knot nematodes (*Meloidogyne* spp.) and factors affecting the utility of *Pasteuria penetrans* as a biocontrol agent. *Nematology* **2**, 823-845. J
- Trudgill, D.L., Evans, K. & Phillips, M.S.** 2000. Potato cyst nematodes: damage mechanisms and tolerance in the potato. In: Marks, R.J. & Brodie, B.B. (eds.). *Potato Cyst Nematodes*. CAB International, 117-133. R
- Trudgill, D.L., Squire, G.R. & Thompson, K.** 2000. A thermal time basis for comparing the germination requirements of some British herbaceous plants. *New Phytologist* **145**, 107-114. J
- Tuovinen, T., Lindqvist, I., Höhn, H., Grassi, A., Zini, M., Schmid, K., Gordon, S.C. & Woodford, J.A.T.** 2000. The role of native and introduced predatory mites in management of spider mites on raspberry in Finland, Italy and Switzerland. *Proceedings of the BCPC Conference - Pests & Diseases*, Brighton, UK, 333-338. P
- Turuspekov, Y., Nakamura, K., Waugh, R., Ramsay, L. & Tuberosa, R.** 2000. Application of SSRs for genetic diversity assessment in barley (*H. vulgare* L.). *Proceedings of the 8th International Barley Genetics Symposium, Barley Genetics VIII (III)*, Adelaide, 22 - 27 October, 66-68. P
- Tzortzakakis, E.A., Peneva, V., Terzakis, M., Neilson, R. & Brown, D.J.F.** 2001. *Longidorus cretensis* n.sp. (Nematoda: Longidoridae) from a vineyard infected with a foliar 'yellow mosaic' on Crete, Greece. *Systematic Parasitology* **46**, 131-139. J
- Tzortzakakis, E.A., Phillips, M.S. & Trudgill, D.L.** 2001. Rotational management of *Meloidogyne javanica* in a small scale greenhouse trial in Crete, Greece. *Nematoptica* **30**, 167-175. J
- Vales, M.I., Corey, A., Costa, J., Hayes, P., Kleinhofs, A., McCoy, S., Riera-Lizarazu, O. & Waugh, R.** 2000. The Oregon Wolfe Barley Population: a resource for barley genetics research and instruction. *Proceedings of the 8th International Barley Genetics Symposium, Barley Genetics VIII (II)*, Adelaide, 22-27 October 2000, 95-97. P

- van de Graaf, P.** 1999. Biology and control of *Phoma clematidina*, causal organism of clematis wilt. *Ph.D. Thesis*, University of Derby. O
- van de Graaf, P.** 1999. The facts on clematis wilt. *The Clematis* 44-47. O
- van de Graaf, P.** 1999. Update on wilt research. *Clematis International* 56-59. O
- van de Graaf, P.** 2001. The fungus *Phoma clematidina* as a cause of clematis wilt. *Clematis International 2001*, 71-74. O
- van de Graaf, P., Chartier-Hollis, J.M., Joseph, M.E. & O'Neill, T.M.** 1999. Clematis wilt. *HDC News* 56, 24-25. O
- van de Graaf, P., Lees, A.K. & Duncan, J.M.** 2000. Epidemiology and control of *Spongospora subterranea* f.sp. *subterranea*, with special reference to zoospore release and bait plant infection. *Proceedings of the first European Powdery Scab Workshop*, Aberdeen, 20-22 July 2000, 57-60. P
- van de Graaf, P., O'Neill, T.M., Chartier-Hollis, J.M. & Joseph, M.E.** 1999. Host-pathogen interactions between *Phoma clematidina* and two clematis varieties differing in wilt resistance. *Abstracts of the Seventh International Fungal Biology Conference*, University of Groningen, The Netherlands, August 22-25, 1999, 86. P
- van de Graaf, P., O'Neill, T.M., Chartier-Hollis, J.M. & Joseph, M.E.** 2001. Susceptibility of *Clematis* varieties and species to stem infection by *Phoma clematidina* as an indicator for resistance to wilt. *European Journal of Plant Pathology* 107, 607-614. J
- Van Regenmortel, M.H.V., Fauquet, C.M., Bishop, D.H.L., Carstens, E., Estes, M., Lemon, S., Maniloff, J., Mayo, M.A., McGeoch, D., Pringle, C.R. & Wickner, R.B.** 2000. Virus Taxonomy. *Seventh Report of the International Committee on Taxonomy of Viruses*. New York, San Diego: Academic Press, 1162. R
- Van Regenmortel, M.H.V., Mayo, M.A., Fauquet, C.M. & Maniloff, J.** 2000. Virus nomenclature: consensus versus chaos. *Archives of Virology* 145, 2227-2232. J
- Vassilakos, N., Brown, D.J.F. & MacFarlane, S.A.** 2000. Studies of vector transmissibility of tobaviruses using transgenic plants expressing the viral RNA2 non-structural transmission proteins. *Abstracts of the XIth International Congress of Virology*, Sydney, Australia, 1999, W58, 249. P
- Vassilakos, N., MacFarlane, S.A. & Brown, D.J.F.** 2000. Vector transmissibility of a tobavirus mutant lacking a non-structural vector transmission protein can be reinstated through complementation with a homologous vector transmissible isolate. *Russian Journal of Nematology* 8, 100. J
- Vassilakos, N., Vellios, E.K., Brown, E.C., Brown, D.J.F. & MacFarlane, S.A.** 2001. Tobavirus 2b protein acts in *trans* to facilitate transmission by nematodes. *Virology* 279, 478-487. J
- Vellios, E.K., MacFarlane, S.A. & Brown, D.J.F.** 2000. Localisation of *Pea early-browning virus* particles in plant roots determines their availability to virus-vector trichodoridae nematodes. *Russian Journal of Nematology* 8, 101. J
- Viola, R.** 2000. Starch synthesis and tuber filling in potato. In: Gupta, A.K. & Kaur, N. (eds.). *Carbohydrate Reserves in Plants: Synthesis and Regulation*. Elsevier, Oxford, 169-194. R
- Viola, R., Brennan, R.M., Davies, H.V. & Sommerville, L.** 2000. L-ascorbic acid accumulation in berries of *Ribes nigrum* L. *Journal of Horticultural Science and Biotechnology* 75, 409-412. J
- Viola, R., Nyvall, P. & Pedersen, M.** 2001. The unique features of starch metabolism in red algae. *Proceedings of the Royal Society: Biological Sciences* 268, 1417-1422. J
- Viola, R., Roberts, A.G., Haupt, S., Gazzani, S., Hancock, R.D., Marmiroli, N., Machray, G.C. & Oparka, K.J.** 2001. Tuberization in potato involves a switch from apoplastic to symplastic phloem unloading. *Plant Cell* 13, 385-398. J
- Wang, Y., Gaba, V., Palukaitis, P. & Gal-On, A.** 2001. Characterization of synergy between *Cucumber mosaic virus* and potyviruses in cucurbit hosts. *Abstracts for the 20th Annual Meeting of the American Society for Virology*, Madison, USA, July 2001, 81. P
- Wardrop, J., Snape, J., Powell, W. & Machray, G.C.** 2000. Generation of an experimental system for the creation of whole genome radiation hybrids in plants. *Journal of Experimental Botany*, 51, 23. P
- Waugh, R.** 2000. Current perspectives in barley genomics. *Proceedings of the 8th International Barley Genetics Symposium, Barley Genetics VIII (I)*, Adelaide, 22 - 27 October, 205-212. P
- Weischer, B. & Brown, D.J.F.** 2000. *An Introduction to Nematodes: General Nematology a Student's Textbook*. Pensoft, Sofia, Bulgaria, 187pp. R
- Wheatley, R.E.** 2001. Volatile organic compound mediated bacterial-fungal interactions over a range of scales in different environments: why do they smell? *Interactions in the Microbial World: 9th International Symposium on Microbial Ecology*. Amsterdam, August 2001. P
- Wheeler, C.T., Tilak, M., Scrimgeour, C.M., Hooker, J.E. & Handley, L.L.** 2000. Effects of symbiosis with *Frankia* and arbuscular mycorrhizal fungus on the natural abundance of ^{15}N in four species of *Casuarina*. *Journal of Experimental Botany* 51, 287-297. J
- Whisson, S.C., Van der Lee, T., Bryan, G.J., Waugh, R., Govers, F. & Birch, P.R.J.** 2000. Chromosome banding across avirulence loci in the potato late blight pathogen. *Agricultural Microbes Genome 2*, San Diego, California, USA, p.23. P
- Whisson, S.C., Van der Lee, T., Bryan, G.J., Waugh, R., Govers, F. & Birch, P.R.J.** 2001. Physical mapping of a portion of the *Phytophthora infestans* genome using a high representation, large insert bacterial artificial chromosome library. *Agricultural Genomes II*, San Diego, Jan 2001. P
- Whisson, S.C., Van der Lee, T., de Luca, S., Bryan, G.J., Waugh, R., Govers, F. & Birch, P.R.J.** 2000. Identifying pathogenicity factors and avirulence genes in *Phytophthora infestans*. *11th Molecular Biology of Fungal Pathogens Meeting*, Norwich, UK. P
- White, N.A., Dehal, P.K., Duncan, J.M., Williams, N.A., Gartland, J.S., Palfreyman, J.W. & Cooke, D.E.L.** 2001. Molecular analysis of intraspecific variation between building and 'wild' isolates of *Serpula lacrymans* and their relatedness to *Serpula himantoides*. *Mycological Research* 105, 447-452. J
- White, N.A., Hallett, P.D., Feeney, D., Palfreyman, J.W. & Ritz, K.** 2000. Changes to water repellence of soil caused by the growth of white-rot fungi: studies using a novel microcosm system. *FEMS Microbiology Letters* 184, 73-77. J
- Williamson, B.** 2000. Fungal diseases of raspberries and related crops. *Teagasc National Soft Fruit Conference and Trade Exhibition (Abstract)*, Dublin, 28 March, p.24. P

Publications

- Williamson, B., Cooke, D.E.L., Kokko, H. & Williams, N.A.** 1999. Downy mildew (*Peronospora rubi*) in *Rubus arcticus*: a threat to commercial berry production in Finland. *Proceedings of the 7th International Rubus-Ribes Symposium*, Finland. P
- Wishart, J., Blok, V.C., Jones, J.T. & Phillips, M.S.** 2000. Development of diagnostics for distinguishing *Meloidogyne chitwoodi* and *M. fallax* from other root-knot nematodes. *Nematology* **2**, 799. P
- Wishart, J., Blok, V.C., Jones, J.T. & Phillips, M.S.** 2000. Diagnostics for distinguishing *Meloidogyne chitwoodi* and *M. fallax* from other root-knot nematodes. *Abstracts of the 39th Annual Meeting of the Society of Nematologists*, Quebec, Canada, 2000. P
- Witte, C.P. & Medina-Escobar, N.** 2001. In-gel detection of ureases with nitroblue tetrazolium and quantification of the enzyme from different crop plants using the indophenol reaction. *Analytical Biochemistry* **290**, 102-107. J
- Witte, C.P., Isidore, E., Tiller, S.A., Davies, H.V. & Taylor, M.A.** 2001. Functional characterisation of urease accessory protein G (ureG) from potato. *Plant Molecular Biology* **45**, 169-179. J
- Wolff, R.L., Christie, W.W., Aitzetmuller, K., Pasquier, E., Pedrono, F., Destaillats, F. & Marpeau, A.M.** 2000. Arachidonic and eicosapentenoic acids in Araucariaceae, a unique feature among seed plants. *Oléagineux, Corps Gras Lipides* **7**, 113-117. J
- Wood, N.T.** 2001. Profiling modified metabolomes. *Trends in Plant Science* **6**, 191. J
- Wood, N.T.** 2001. Virus movement crosses the Kingdom barrier. *Trends in Plant Science* **6**, 241-242. J
- Wood, N.T., Allan, A.C., Haley, A., Viry-Moussaïd, M. & Trewavas, A.J.** 2000. The characterization of differential calcium signalling in tobacco guard cells. *The Plant Journal* **24**, 335-344. J
- Wood, N.T., Haley, A., Viry-Moussaïd, M., Johnson, C.H., van der Luit, A.H. & Trewavas, A.J.** 2001. The calcium rhythms of different cell types oscillate with different circadian phases. *Plant Physiology* **125**, 787-796. J
- Wood, N.T., McGavin, W.J., Mayo, M.A. & Jones, A.T.** 2001. Studies on a putative second gene in RNA-1 of *Raspberry bushy dwarf virus*. *Acta Horticulare* **551**, 19-22. J
- Woodford, J.A.T. & Griffiths, D.W.** 2001. Optimising rearing conditions for *Myzus persicae* on potato sprouts: how important are glycoalkaloids? *Proceedings of the 6th International Symposium on Aphids 'Aphids in a New Millennium'*, Rennes, France, September 2001. P
- Woodford, J.A.T., Gordon, S.C., Höhn, H., Schmid, K., Tuovinen, T. & Lindqvist, I.** 2000. Monitoring raspberry beetle (*Byturus tomentosus*) with white sticky traps: the experience from three geographically distinct European areas. *Proceedings of the BCPC Conference - Pests & Diseases*, Brighton, UK, 2000, 321-326. P
- Woodford, J.A.T., Williamson, B. & Gordon, S.C.** 2001. Raspberry beetle damage decreases shelf-life of raspberries infected with *Botrytis cinerea* (Abstract). *8th International Rubus & Ribes Symposium*, Dundee, July 2001. P
- Wright, K.M., Duncan, G.H., Pradel, K.S., Carr, F., Wood, S., Oparka, K.J. & Santa Cruz, S.** 2000. Analysis of the *N* gene hypersensitive response induced by a fluorescently tagged *Tobacco mosaic virus*. *Plant Physiology* **123**, 1375-1385. J
- Wu, K., Nunan, N., Ritz, K. & Crawford, J.W.** 2001. Characterisation of 3-D heterogeneous soil structure using Multi-Markov chain model. *4th Conference of the Working Group on Pedometrics of the International Union of Soil Sciences*, Gent, Belgium, 19-21 September 2001. P
- Wu, K., Nunan, N., Ritz, K., Crawford, J.W. & Young, I.M.** 2000. Multiple-scale modelling of the spatial distribution of soil bacteria using random field methods. *Third European Conference on Geostatistics for Environmental Applications*, Avignon, October 2000. P
- Yeretzian, C., Blank, I., Fumeaux, R., Pascual, E.C. & Goodman, B.A.** 1999. Oxidation processes in liquid coffee investigated by electron paramagnetic resonance (EPR) spectroscopy. *Nestlé R & D Report*. Nestlé. T
- Yli-Mattila, T., Paavanen-Huhtala, S., Fenton, B. & Tuovinen, T.** 2000. Molecular analysis of the predatory mite *Euseius finlandicus* by RAPD-PCR and ITS sequences. *Experimental and Applied Acarology* **24**, 863-880. J
- Young, I.M. & Ritz, K.** 2000. Tillage, habitat space and function of soil microbes. *Soil and Tillage Research* **53**, 201-213. J
- Younis, A.M., Kilcoyne, S.H., Yacob, M. & Goodman, B.A.** 1999. Soils from the Jabal al-Akhdar region of north east Libya: characterisation of the iron using chemical methods and Mössbauer spectroscopy. *Hyperfine Interactions* **122**, 259-268. J
- Yu, Y., Tomkins, J.P., Waugh, R., Frisch, D.A., Kudrna, D., Kleinhofs, A., Brueggeman, R.S., Muehlbauer, G.J., Wise, R.P. & Wing, R.A.** 2000. A bacterial artificial chromosome library for barley (*Hordeum vulgare* L.) and the identification of clones containing putative resistance genes. *Theoretical and Applied Genetics* **101**, 1093-1099. J
- Zaitlin, M. & Palukaitis, P.** 2000. Advances in understanding plant viruses and virus diseases. *Annual Review of Phytopathology* **38**, 117-143. J
- Zhang, C.J., Machray, G.C. & Wilson, T.M.A.** 2000. Improvement of Chinese wheat (*Triticum aestivum* L.) cultivars by transgenesis for resistance to *Soilborne wheat mosaic virus* (SBWMV). *Scottish Plant Molecular and Cell Biology Forum*, St Andrews, January 2000. P
- Zhang, X., Bengough, A.G., Crawford, J.W., Young, I.M., Cheddell, J.M. & Deeks, L.** 2000. Modelling water flow and solute transport in heterogeneous soil. *Eurosoil 2000*, Reading, September 2000. P
- Zheng, J., Peneva, V. & Brown, D.J.F.** 2000. *Longidorus camelliæ* sp. n. (Nematoda: Longidoridae) associated with ornamental cultivars of *Camellia japonica* growing in a nursery at Fuyang, Zhejiang Province, Eastern China. *Systematic Parasitology* **47**, 119-125. J
- Ziegler, A., Cowan, G.H., Torrance, L., Ross, H.A. & Davies, H.V.** 2000. Facile assessment of cDNA constructs for expression of functional antibodies in plants using the *Potato virus X* vector. *Molecular Breeding* **6**, 327-335. J