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13 Addresses to professional bodies

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INSTITUTE OF FOOD, NUTRITION AND HUMAN HEALTH

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- Morel, P. C. H. (1998). Prediction of offal protein content. *International Pig Growth Modelling Group, Annual Meeting*, May 18, Wageningen, Netherlands.
- Morel, P. C. H. (1998). Relationship between empty body weight and body lipid, body protein, body water and body ashes. *International Pig Growth Modelling Group, Annual Meeting*, May 17, Wageningen, Netherlands.
- Morel, P. C. H. (1998). Relationship between offal weight and offal protein content and offal lipid content. *International Pig Growth Modelling Group, Annual Meeting*, May 18, Wageningen, Netherlands.
- Moughan, P. J. (1998). Advances in feed evaluation for companion animals. *International Postgraduate Seminar on New Developments in Feed Evaluation*, May 15, Wageningen, Netherlands.
- Moughan, P. J. (1998). Advancing the food industry: A University perspective. *New Zealand Institute of Food, Science and Technology and Nutrition Society of New Zealand Conference*, July 1, Nelson, NZ.
- Moughan, P. J. (1998). Amino acid technologies and Massey University lysine bioassay. *Degussa Chemical Company*, May 25, Germany.
- Moughan, P. J. (1998). Amino acids: The collection of ileal digesta and characterisation of the endogenous component. *International Postgraduate Seminar on New Developments in Feed Evaluation*, May 13, Wageningen, Netherlands.
- Moughan, P. J. (1998). Amino acids: Metabolism, digestibility and availability. *International Postgraduate Seminar on New Developments in Feed Evaluation*, May 13, Wageningen, Netherlands.
- Moughan, P. J. (1998). New developments in the determination of protein and amino acids. *International Postgraduate Seminar on New Developments in Feed Evaluation*, May 12, Wageningen, Netherlands.
- Moughan, P. J. (1998). An overview of recent technological development in the feedstuffs industry. *Agribands International Product Steering Group*, October 28, London, Ontario, Canada.
- Moughan, P. J. (1998). Principles of chemical analysis. *International Postgraduate Seminar on New Developments in Feed Evaluation*, May 12, Wageningen, Netherlands.

- Otter, D., Norris, C. S., Schollum, L. M., & Schlothauer, R. (1998). Fishing for the ACE inhibitor the hole. *International Dairy Federation Nutrition Week*, March 9-11, Wellington, NZ.
- Pluske, J. R. (1998). Maximizing the response in pig and poultry diets containing vegetable proteins by enzyme supplementation. *Alltech's Annual Symposium*, April 21, Lexington, Kentucky, USA.
- Pluske, J. R. (1998). Maximising the response to enzyme supplementation of pig and poultry diets in the light of impending legislative controls. *Alltech's European, Middle Eastern and African Lecture Tour*, February 16, Ireland.
- Pluske, J. R. (1998). Maximising the response to enzyme supplementation of pig and poultry diets in the light of impending legislative controls. *Alltech's European, Middle Eastern and African Lecture Tour*, February 17, England.
- Pluske, J. R. (1998). Maximising the response to enzyme supplementation of pig and poultry diets in the light of impending legislative controls. *Alltech's European, Middle Eastern and African Lecture Tour*, February 18, Portugal.
- Pluske, J. R. (1998). Maximising the response to enzyme supplementation of pig and poultry diets in the light of impending legislative controls. *Alltech's European, Middle Eastern and African Lecture Tour*, February 19, Spain.
- Pluske, J. R. (1998). Maximising the response to enzyme supplementation of pig and poultry diets in the light of impending legislative controls. *Alltech's European, Middle Eastern and African Lecture Tour*, February 20, Italy.
- Pluske, J. R. (1998). Maximising the response to enzyme supplementation of pig and poultry diets in the light of impending legislative controls. *Alltech's European, Middle Eastern and African Lecture Tour*, February 23, Hungary.
- Pluske, J. R. (1998). Maximising the response to enzyme supplementation of pig and poultry diets in the light of impending legislative controls. *Alltech's European, Middle Eastern and African Lecture Tour*, 24 February 24, Czech Republic.
- Pluske, J. R. (1998). Maximising the response to enzyme supplementation of pig and poultry diets in the light of impending legislative controls. *Alltech's European, Middle Eastern and African Lecture Tour*, February 25, Germany.
- Pluske, J. R. (1998). Maximising the response to enzyme supplementation of pig and poultry diets in the light of impending legislative controls. *Alltech's European, Middle Eastern and African Lecture Tour*, February 26, Germany.
- Pluske, J. R. (1998). Maximising the response to enzyme supplementation of pig and poultry diets in the light of impending legislative controls. *Alltech's European, Middle Eastern and African Lecture Tour*, February 27, France.
- Pluske, J. R. (1998). Maximising the response to enzyme supplementation of pig and poultry diets in the light of impending legislative controls. *Alltech's European, Middle Eastern and African Lecture Tour*, March 2, Switzerland.
- Pluske, J. R. (1998). Maximising the response to enzyme supplementation of pig and poultry diets in the light of impending legislative controls. *Alltech's European, Middle Eastern and African Lecture Tour*, March 3, Poland.
- Pluske, J. R. (1998). Maximising the response to enzyme supplementation of pig and poultry diets in the light of impending legislative controls. *Alltech's European, Middle Eastern and African Lecture Tour*, March 4, Denmark.
- Pluske, J. R. (1998). Maximising the response to enzyme supplementation of pig and poultry diets in the light of impending legislative controls. *Alltech's European, Middle Eastern and African Lecture Tour*, March 5, Netherlands.
- Pluske, J. R. (1998). Maximising the response to enzyme supplementation of pig and poultry diets in the light of impending legislative controls. *Alltech's European, Middle Eastern and African Lecture Tour*, March 6, Belgium.

- Pluske, J. R. (1998). Opportunities for increasing the nutritive value of by-products for the intensive livestock industries in Asia using enzyme biotechnology. *Thai Veterinary Medical Association*, August 5, Bangkok, Thailand
- Pluske, J. R. (1998). Opportunities and strategies to reduce effluent and sludge nutrients through diet manipulation. *National Pig Environmental Conference*, October 15, Gold Coast, Queensland, Australia.
- Purchas, R. W. (1998). Muscularity as an important carcass characteristic. *Department of Agricultural, Food and Nutritional Science*, February 10, Edmonton, Alberta, Canada.
- Purchas, R. W. (1998). Muscularity as a significant carcass characteristic. *Agriculture and Agri-Food Canada Scientists*, February 5, Lethbridge Research Centre, Alberta, Canada.
- Purchas, R. W. (1998). Relationships between ultimate pH and meat quality. *Agriculture and Agri-Food Canada Scientists*, February 9, Lacombe Research Centre, Alberta, Canada.
- Quintino, M. E. (1998). The effect of enzymic hydrolysis on the nutritive value of milk protein. *5th Annual New Zealand Engineering and Technology Conference*, November 26, Massey University, Palmerston North, NZ.
- Revell, D. K. (1998). Protein-derived bioactive factors in food. *22nd Annual Scientific Meeting of the Nutrition Society of Australia*, December 2, Adelaide, Australia.
- Rutherford, K. J., Cross, M., & Gill, H. S. (1998). *In vivo* versus *in vitro* methods for identifying immunomodulatory milk components. *International Dairy Federation Nutrition Week*, March 9-11, Wellington, NZ.
- Rutherford, S. M. (1998). Development of an assay to determine available lysine. *Degussa AG*, October 23, Hanau, Germany.
- Rutherford, S. M. (1998). Introduction to Massey University and the Institute of Food, Nutrition and Human Health. *Degussa AG*, October 22, Hanau, Germany.
- Schollum, L. M., & Frearson, N. (1998). Beyond the French Paradox: Cheese and hypertension. *International Dairy Federation Nutrition Week*, March 9-11, Wellington, NZ.
- Shadbolt, N. M. (1998). Benchmarking dairy farm businesses. *Large Herds Australia Conference*, March 20, Tanunda, Australia.
- Shadbolt, N. M. (1998). The benefits of formal strategic planning in a Maori Incorporation: A case study. *New Zealand Society of Farm Management (Inc) National Conference*, November 19, Waikato University, Hamilton, NZ.
- Shadbolt, N. M. (1998). The business of pastoral milk production. *Argentinian Large Herd Owners*, November 6, Massey University, Palmerston North, NZ.
- Shadbolt, N. M. (1998). Comparative costs and returns at the farm level for milk production in New Zealand. *Irish Research Economists/Dairy Board*, October 15, Massey University, Palmerston North, NZ.
- Shadbolt, N. M. (1998). Driving the farm business. *Gisborne Farmer Group Study Tour*, July 23, Palmerston North, NZ.
- Shadbolt, N. M. (1998). Economic efficiency in dairy farm businesses. *'Milk from Pasture' workshop for Latin American Dairy Industry*, October 19-20, Palmerston North, NZ.
- Shadbolt, N. M. (1998). Evaluating the business risk associated with feeding supplements to dairy cows on pasture. *New Zealand Society of Animal Production*, June 23, Palmerston North, NZ.
- Shadbolt, N. M. (1998). Farm business management: planning for growth: planning techniques and tools. *Southern North Island Sheep and Beef Cattle Farmers' Conference*, June 23, Feilding, NZ.
- Shadbolt, N. M. (1998). Farm financial resources and the environment. *OECD Workshop on Agr-Environmental Indicators*, September 22, York, England.

- Shadbolt, N. M. (1998). Farm management practices and their impact on productive values of lands. *Central Districts Branch of the New Zealand Institute of Valuers Seminar*, November 14, Palmerston North, NZ.
- Shadbolt, N. M. (1998). Financial performance measures of farm business sustainability. *Fertilizer and Lime Research Centre Conference on Long-Term Nutrients Needs for New Zealand's Primary Industries: Global Supply, Production Requirements and Environmental Constraints*, February 12, Palmerston North, NZ.
- Shadbolt, N. M. (1998). Is economic farm surplus everything? *Massey University No. 4 Dairy Farm Field Workshop*, November 2, Palmerston North, NZ.
- Shadbolt, N. M. (1998). Ownership structures for large dairy farm businesses. *Manawatu Large Herds Conference*, March 8, Palmerston North, NZ.
- Shadbolt, N. M. (1998). Planning, priorities and business management. *Taranua/Wairarapa Drought Recovery Committee Seminar: Securing your Farming Future*, October 19, Dannevirke, NZ.
- Shadbolt, N. M. (1998). The sharp end of agribusiness. *Open Day for Media: Keeping in Touch with Agriculture*, May 12, Palmerston North, NZ.
- Shadbolt, N. M. (1998). Strategic alliances for competitive viability in lamb production systems: Impact upon risks and returns. *Annual Conference of the New Zealand Agricultural and Resource Economics Society*, July 3, Blenheim, NZ.
- Shadbolt, N. M. (1998). Strategic alliances for competitive viability in New Zealand pastoral systems. *Third International Conference on Chain Management in Agribusiness and the Food Industry*, May 29, Ede, Netherlands.
- Shadbolt, N. M. (1998). Strategic alliances for supply and quality management in lamb production systems. *New Zealand Institute of Agricultural Science and the New Zealand Society for Horticultural Science Annual Convention*, August 29, Napier, NZ.
- Shadbolt, N. M. (1998). Strategic planning on a family farm to identify the business growth required for success: A case study. *New Zealand Society of Farm Management (Inc) National Conference*, November 19, Waikato University, Hamilton, NZ.
- Shadbolt, N. M. (1998). Sustainability issues for pastoral farms. *McRae Trust Sustainable Land Management Project Field Day*, July 14, Wairoa, NZ.
- Shadbolt, N. M. (1998). Trends and relationships between recognised and new business performance indicators for both dairy and sheep and beef cattle farms. *New Zealand Society of Farm Management (Inc) National Conference*, November 19, Waikato University, Hamilton, NZ.
- Shadbolt, N. M. (1998). Valuing women's work in agriculture in New Zealand. *Valuing Women's Work in Agriculture and Women's Lifelong Study Conference*, September 1, Hokkaido, Japan.
- Shu, Q. (1998). Probiotics against acidosis and vaccination against acidosis. *South-West China Agriculture University*, January 6, China.
- Shu, Q. (1998). Probiotics (HN001 & HN019) reduce severity of *Salmonella typhimurium* in mice. *Joint Annual Meeting of The New Zealand Microbiological Society and The New Zealand Society for Biochemistry and Molecular Biology*, December 1, Masterton, NZ.
- Shu, Q. (1998). Vaccination against acidosis. *China Pharmaceutical University*, January 1, China.
- Shu, Q. (1998). Vaccination against acidosis. *Jiangsu Provincial Health and Anti-Epidemic Centre*, January 8, China.
- Shu, Q., Liu, A., Rowe, J., & Gill, H. S. (1998). *Lactobacillus* species produce more D-lactic acid than *Streptococcus bovis*. *Joint Annual Meeting of The New Zealand Microbiological Society and The New Zealand Society for Biochemistry and Molecular Biology*, November 30-December 3, Masterton, NZ.
- Shu, Q., Prasad, J., Gopal, P. K., & Gill, H. S. (1998). High doses of probiotics (DR10, DR20 and HN017) have no adverse effects on the health of mice. *Australian Society for Microbiology*, September 30, Hobart, Australia.

- Shu, Q., Rutherford, K. J., Prasad, J., Gopal, P. K., Smart, J. D., & Gill, H. S. (1998). *Lactobacillus rhamnosus* HN001: immunostimulation and anti-infection properties. *International Dairy Federation Nutrition Week*, March 9-11, Wellington, NZ.
- Singh, H. (1998). Characterisation of protein aggregates formed during initial stages of heat-induced gel formation in whey protein solutions. *European Dairy Experts Symposium*, September 16, Arnhem, Netherlands.
- Singh, H. (1998). Heat-induced interactions of milk proteins and their impact on functionality. *Nestlé Research Centre*, March 20, Lausanne, Switzerland.
- Singh, H. (1998). On the stability of oil-in-water emulsions formed using highly hydrolysed whey proteins. *Food Emulsions and Foams Conference*, March 16, Seville, Spain.
- Singh, H., & Lucey, J. A. (1998). Recent research at Massey University on fermented milk systems. *New Zealand Dairy Group, Milk Powders Group*, June 20, Palmerston North, NZ.
- Sofat, D. (1998). Change in consumer response to written and physical product concepts. *New Zealand Engineering and Technology Postgraduate Conference*, November 26, Massey University, Palmerston North, NZ.
- Tanner, D. J. (1998). Coolstore operation: temperature and relative humidity management. *ENZA FRUIT staff*, December 18, Hastings, NZ.
- Tanner, D. J. (1998). Development of bin shrouds for reduction of apple mass loss. *ENZA FRUIT New Zealand (International) Postharvest and Logistics Review Day*, August 27, Hastings, NZ.
- Tanner, D. J. (1998). Modelling the effects of apple packaging design on heat and mass transfer. *ENZA FRUIT New Zealand (International) Postharvest and Logistics Review Day*, August 27, Hastings, NZ.
- Tanner, D. J. (1998). Packaging research review. *New Zealand Avocado Industry Packhouse Operators Information Day*, November 16, Auckland, NZ.
- Vyas, H. K. (1998). Development of a method for estimating cake height and porosity during crossflow filtration of particulate suspensions. *5th Annual New Zealand Engineering and Technology Postgraduate Conference*, November 27, Massey University, Palmerston North, NZ.
- Watson, P. E. (1998). Nutrition during pregnancy in New Zealand. *Australasian Clinical Nutrition Society*, September 25, Auckland, NZ.
- Winger, R. J. (1998). Functional foods and new products beyond 2000. *New Zealand Poultry Industry Conference*, July 21, Auckland, NZ.
- Winger, R. J. (1998). Research and training for the food industry. *International Symposium on Water Management in the Design and Distribution of Quality Foods (ISOPOW 7)*, June 2, Helsinki, Finland.
- Zhou, J. S., Gopal, P. K., Prasad, J., Rutherford, K. J., & Gill, H. S. (1998). *Lactobacillus rhamnosus* HN001 and *Bifidobacterium lactis* HN017 do not degrade gastric mucin *in vitro*. *International Dairy Federation Nutrition Week*, March 9-11, Wellington, NZ.

14 Extension activities

- Bailey, W. C. (1998). (Conference). Texas Agricultural Leadership Conference. January 13, Palmerston North, NZ.
- Barugh, I. (1998). (Seminar). Alternative low-cost pig housing options. *South Island Pork Producers on behalf of New Zealand Pork*, April 22, Timaru, NZ.
- Barugh, I., & Pearson, G. (1998). (Seminar). Let's Talk Pigs Seminar. *Organised for Pork Producers on behalf of New Zealand Pork*, November 6, Christchurch, NZ.
- Barugh, I., & Pearson, G. (1998). (Seminar). Let's Talk Pigs Seminar. *Organised for Pork Producers on behalf of New Zealand Pork*, November 5, Timaru, NZ.

- Barugh, I., & Pearson, G. (1998). (Seminar). Let's Talk Pigs Seminar. *Organised for Pork Producers on behalf of New Zealand Pork*, November 9, Palmerston North, NZ.
- Barugh, I., & Pearson, G. (1998). (Seminar). Let's Talk Pigs Seminar. *Organised for Pork Producers on behalf of New Zealand Pork*, November 9, Pukekohe, NZ.
- Barugh, I., & Pearson, G. (1998). (Seminar). Let's Talk Pigs Seminar. *Organised for Pork Producers on behalf of New Zealand Pork*, November 10, Matamata, NZ.
- Barugh, I., Pearson, G., & Volz, M. (1998). (Seminars). New Zealand Pork Industry Board Environmental Task Force Seminars. *Organised for Pork Producers on behalf of New Zealand Pork*, March 25, Christchurch, NZ.
- Barugh, I., Prince, Z. K., & Kunz, P. (1998). (Seminar). Canterbury Outdoor Pig Day. *Organised for Pork Producers on behalf of New Zealand Pork*, November 20, Christchurch, NZ.
- Barugh, I., & Volz, M. (1998). (Seminars). New Zealand Pork Industry Board Environmental Task Force Seminars. *Organised for Pork Producers on behalf of New Zealand Pork*, March 23, Oamaru, NZ.
- Barugh, I., & Volz, M. (1998). (Seminars). New Zealand Pork Industry Board Environmental Task Force Seminars. *Organised for Pork Producers on behalf of New Zealand Pork*, March 24, Timaru, NZ.
- Barugh, I., & Volz, M. (1998). (Seminars). New Zealand Pork Industry Board Environmental Task Force Seminars. *Organised for Pork Producers on behalf of New Zealand Pork*, March 27, Hawera, NZ.
- Barugh, I., & Volz, M. (1998). (Seminars). New Zealand Pork Industry Board Environmental Task Force Seminars. *Organised for Pork Producers on behalf of New Zealand Pork*, March 31, Hamilton, NZ.
- Brookes, I. M. (1998). (Conference). Convenor of Massey University Dairyfarmers Conference, May 19-21, Hawera, NZ.
- King, R. D. (1998). (Block Course). The basic anatomy of poultry. *Agriculture ITO Block Course in Poultry Production (Husbandry)*, May 13, Palmerston North, NZ.
- King, R. D. (1998). (Block Course). The basic anatomy of poultry. *Agriculture ITO Block Course in Poultry Production (Husbandry)*, June 16, Palmerston North, NZ.
- King, R. D. (1998). (Block Course). Egg structure and chick embryo development. *Agriculture ITO Block Course in Poultry Production (Husbandry)*, May 13, Palmerston North, NZ.
- King, R. D. (1998). (Block Course). Egg structure and chick embryo development. *Agriculture ITO Block Course in Poultry Production (Husbandry)*, June 18, Palmerston North, NZ.
- King, R. D. (1998). (Block Course). The lighting requirements of poultry, and lighting systems and programmes for poultry. *Agriculture ITO Block Course in Poultry Production (Husbandry)*, May 12, Palmerston North, NZ.
- King, R. D. (1998). (Block Course). The lighting requirements of poultry, and lighting systems and programmes for poultry. *Agriculture ITO Block Course in Poultry Production (Husbandry)*, June 16, Palmerston North, NZ.
- King, R. D. (1998). (Block Course). The reproduction process of poultry. *Agriculture ITO Block Course in Poultry Production (Husbandry)*, May 12, Palmerston North, NZ.
- King, R. D. (1998). (Block Course). The reproduction process of poultry. *Agriculture ITO Block Course in Poultry Production (Husbandry)*, June 16, Palmerston North, NZ.
- King, R. D. (1998). (Block Course). The structure and function of poultry body systems. *Agriculture ITO Block Course in Poultry Production (Husbandry)*, May 13, Palmerston North, NZ.
- King, R. D. (1998). (Block Course). The structure and function of poultry body systems. *Agriculture ITO Block Course in Poultry Production (Husbandry)*, June 16, Palmerston North, NZ.

- Moughan, P. J., Pluske, J. R., & Morel, P. C. H. (1998). (Seminar). Using technology to optimise nutrition. *Consultants and nutritionists servicing the New Zealand Pork industry on behalf of New Zealand Pork*, June 16, Palmerston North, NZ.
- Pearson, G., & Volz, M. (1998). (Seminars). New Zealand Pork Industry Board Environmental Task Force Seminars. *Organised for Pork Producers on behalf of New Zealand Pork*, March 20, Palmerston North, NZ.
- Shadbolt, N. M. (1998). (Competition). Judge of Finalists, WestpacTrust Kiwi Dairy Farmer of the Year 1997/1998. April 15-17, Taranaki, NZ; Manawatu, NZ; Wairarapa, NZ.
- Shadbolt, N. M. (1998). (Competition). Judge of Finalists, 1998 Richmond Tararua Farmer of the Year. March 2-3, Tararua, NZ.
- Wall, C. R. (1998). (Ministerial Review). Review of the Ministry of Health Food and Nutrition Guidelines for Healthy Adolescents. *Ministry of Health*, Auckland, NZ.
- Watson, P. E. (1998). (Training Course). Effects of inappropriate diet on the child: Training and Trainers Course, Pacific Island Heartbeat. *Pacific Island Child Health Education Programme*, July 16, Auckland, NZ.

16 Professional consultancies

- Bailey, W. C. (1998). Market information systems. *Zhito Varda Mills, Title Veles, Macedonia*, June 19.
- Bailey, W. C. (1998). Market price and market news: Establishing a market information system for Bulgaria. *Sofia Commodity Exchange, Sofia, Bulgaria*, July 3.
- Jordan, B. R. (1998). Report on the United Nations Environmental Programme Panel Meeting on Effects of Ozone Depletion, Hawaii, August 9-17, 1998. *NZ Ministry of Research, Science and Technology*.
- Maguire, K. M., Tanner, D. J., & Banks, N. H. (1998). Minimised weight loss for pipfruit. *ENZA FRUIT New Zealand (International)*, December 12.
- Mellor, D. J. (1998). Castration of lambs: Clarification of findings at variance with a study in Edinburgh. *MAF Regulatory Authority and AWAC*, July 6.
- Mellor, D. J. (1998). Commentary and critique on the Government Animal Welfare Bill 1998. *Primary Production Select Committee, New Zealand Parliament*, November 30.
- Mellor, D. J. (1998). Comments on a hominid rights amendment for the Animal Welfare Bill 1998. *Primary Production Select Committee, New Zealand Parliament*, November 30.
- Mellor, D. J. (1998). Commercial abattoir practices and the welfare of slinks (fetal calves). *Australian Animal Welfare Advisory Committee*, February 25.
- Mellor, D. J. (1998). Policy development for new Animal Welfare Bill: Critique and evaluation. *MAF Regulatory Authority and NAEAC*, January-May.
- Mellor, D. J., & Battye, J. (1998). Revised code of professional standards and ethics. *Royal Society of New Zealand*, February 16.
- Mellor, D. J., Gregory, N. G., Kirk, E. J., & Stafford, K. J. (1998). Cheek branding in cattle: Commentary and critique. *Animal Welfare Advisory Committee, NZ*, February 25.
- Mellor, D. J., Gregory, N. G., Kirk, E. J., & Stafford, K. J. (1998). Cheek branding in cattle: Commentary and critique. *Minister of Primary Industries, Queensland, Australia*, February 25.
- Mellor, D. J., Gregory, N. G., & Stafford, K. J. (1998). Alleviating the distress of ring castration and tailing by use of local anaesthetic at the time of ring application. *MAF Regulatory Authority and AWAC, NZ*, July 10.
- Mellor, D. J., Gregory, N. G., & Stafford, K. J. (1998). Controlling inflammatory pain after amputation dehorning in calves. *MAF Regulatory Authority and AWAC, NZ*, July 14.

- Norina, L. V., & Bailey, W. C. (1998). Trade opportunities for New Zealand food exporters, 1999 to 2004. *Trade New Zealand*, April.
- Shadbolt, N. M. (1998). Strategic planning for a breed society. *New Zealand Gelbvieh Society*, February 24.
- Tanner, D. J. (1998). Modelling the effects of apple packaging design on heat and mass transfer. *ENZAFRUIT New Zealand (International)*, August 24.

17 Radio, television and print interviews

- Mellor, D. J. (1998, November 2). Animals' welfare safe in Massey hands. *Massey News*.
- Mellor, D. J. (1998). Calf castration survey: Purposes and context. [Radio interview by Kevin Ikin]. *Radio New Zealand News*, October 13.
- Mellor, D. J. (1998). Food developments directed at special lifestyle and life cycle needs; half IFNHH staff are industry-funded full-time researchers. [Radio interview by Jill Galloway]. *Radio New Zealand News*, May 12.
- Mellor, D. J. (1998, October 23). Launch of Animal Welfare Science and Bioethics Centre. [Interview by Richard Throw]. *Evening Standard (Palmerston North, NZ)*.
- Mellor, D. J. (1998). Launch of Animal Welfare Science and Bioethics Centre. [Radio interview by Kevin Ikin]. *Radio New Zealand Rural News*, October 12.
- Mellor, D. J. (1998, October 19). New AGMARDT Professor. *Massey News*.
- Mellor, D. J. (1998). The trifecta: Food, nutrition and human health. *Massey University Media Open Day*, May 12, Massey University, Palmerston North, NZ.
- Peachey, B. M. (1998, September 22). Cash awarded to meat quality scholar. [Interview by Deborah Benson]. *Rodney Times*.
- Shadbolt, N. M. (1998, October 23). Scorecard a new way to measure profits. [Interview by Rural Reporter]. *Dannevirke Evening News*.
- Volz, M. (1998, March 24). Applying for resource consents made easier. [Interview by Dionne Barton]. *Evening Standard (Palmerston North, NZ)*.
- Volz, M. (1998, November 10). Detecting bad smells was a pig of a job. [Interview by Dionne Barton]. *Evening Standard (Palmerston North, NZ)*.

INSTITUTE OF FUNDAMENTAL SCIENCES**1 Refereed journal papers**

- Ainscough, E. W., Brodie, A. M., Coll, R. K., Coombridge, B. A., & Waters, J. M. (1998). The reaction of $\text{Os}_3(\text{CO})_{10}(\text{CH}_3\text{CN})_2$ with carboxylic acids: The crystal and molecular structures of $[\text{Os}_3\text{H}(\text{CO})_{10}(\text{C}_6\text{H}_4(\text{OH})\text{CO}_2)]$ and $[\text{Os}_3\text{H}(\text{CO})_{10}(\text{C}_6\text{H}_5\text{COS})]$. *Journal of Organometallic Chemistry*, 556, 197-205.
- Ainscough, E. W., Brodie, A. M., Cresswell, R. J., & Waters, J. M. (1998). Synthetic, spectroscopic and X-ray crystallographic studies on the uranyl(VI) complexes of the β -diketophenol ligands 1-(2-hydroxyphenyl)-1,3-butanedione and 1-(2-hydroxyphenyl)-3-phenyl-1,3-propanedione. *Inorganica Chimica Acta*, 277, 37-45.
- Ainscough, E. W., Brodie, A. M., Denny, W. A., Finlay, G. J., & Ranford, J. D. (1998). Nitrogen, sulfur and oxygen donor adducts with copper(II) complexes of antitumor 2-formylpyridinethiosemicarbazone analogs: Physicochemical and cytotoxic studies. *Journal of Inorganic Biochemistry*, 70, 175-185.
- Ainscough, E. W., Brodie, A. M., Dobbs, A. J., Ranford, J. D., & Waters, J. M. (1998). Antitumour copper(II) salicylaldehyde benzoylhydrazone (H_2sb) complexes: Physicochemical properties and the single-crystal X-ray structures of $[\{\text{Cu}(\text{H}_2\text{sb})(\text{CCl}_3\text{CO}_2)_2\}_2]$ and $[\{\text{Cu}(\text{Hsb})(\text{ClO}_4)(\text{C}_2\text{H}_5\text{OH})\}_2]$ and the related salicylaldehyde acetylhydrazone (H_2sa) complex, $[\text{Cu}(\text{Hsa})\text{Cl}(\text{H}_2\text{O})]\cdot\text{H}_2\text{O}$. *Inorganica Chimica Acta*, 267, 27-38.
- Anthony, G. J. (1998). It's all right to be wrong. *Australian Mathematics Teacher*, 54(4), 34-37.
- Anthony, G. J. (1998). Task demands and instructional support in mathematics. *SET*, 2(6).
- Blackwell, L. F., Brown, J. B., & Cooke, D. (1998). Definition of the potentially fertile period from urinary steroid excretion rates. Part II, A threshold value for pregnanediol glucuronide as a marker for the end of the potentially fertile period of the human menstrual cycle. *Steroids*, 63, 5-13.
- Boglaev, I. (1998). Finite difference domain decomposition algorithms for a parabolic problem with boundary layers. *Computers and Mathematics with Applications*, 36(6), 25-40.
- Boglaev, I. (1998). On a domain decomposition algorithm for a singularly perturbed reaction-diffusion problem. *Journal of Computational and Applied Mathematics*, 98(2), 213-232.
- Britton, M. M., Callaghan, P. T., Kilfoil, M. L., Mair, R. W., & Owens, K. (1998). NMR velocimetry and spectroscopy at microscopic resolution in small rheometric devices. *Applied Magnetic Resonance*, 15, 287-301.
- Brooker, S., Croucher, P. D., Davidson, T. C., Dunbar, G. S., McQuillan, A. J., & Jameson, G. B. (1998). First of a new family of tetraamine bis(μ -thiolate)-containing macrocycles: Structure and stepwise oxidations and reductions of the dinickel(II) complex. *Journal of the Chemical Society, Chemical Communications*, (19), 2131-2132.
- Brown, S. (1998). Photosynthesis and respiration in leave slices. *Biochemical Education*, 26, 164-167.
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- McLachlan, R. I. (1998). Numerical solution of conservative and Lyapunov systems. *Mini-Symposium on Ordinary and Stochastic Differential Equations: Numerical Methods and Applications*, January 22, University of Auckland, Auckland, NZ.
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- McLachlan, R. I. (1998). Spatial discretization of PDE's with integrals. *Workshop on Accurate Simulation and Modelling of Physical Systems*, November 20, IGPP, Scripps Institute, San Diego, USA.
- McLachlan, R. I. (1998). Symmetry preservation. *Auckland Numerical Ordinary Differential Equations*, July 8-9, University of Auckland, Auckland, NZ.
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- Smith, T. A. (1998). Towards a hydrothermal eruption flow model. *20th New Zealand Geothermal Workshop*, November 13, University of Auckland, Auckland, NZ.
- Teo, K. L. (1998). The computation and basic properties of chromatic polynomials. *New Zealand Mathematics Society*, July 7, Victoria University of Wellington, Wellington, NZ.
- Thornley, G. (1998). Experiences of doctoral students of mathematics in New Zealand. *New Zealand Mathematics Colloquium*, July 8, Victoria University of Wellington, Wellington, NZ.

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14 Extension activities

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- Blackwell, L. F. (1998). (Annual Meeting). *Scientific and Medical Advisory Board*, September 4, Palmerston North, NZ.
- Buckley, P. D. (1998). (School chemistry class visit). Controlling pH. *Palmerston North Girls' High School*, Palmerston North, NZ.
- Hall, S. B. (1998). (Assessor). Assessor for CREST-NZ Scheme Silver Award. *CREST-NZ*, May 14, Palmerston North, NZ,
- Hall, S. B. (1998). (Judge). Manawatu Science Fair. *Manawatu Science Fair Committee*, July 31, Palmerston North, NZ,
- Hall, S. B. (1998). (High school chemistry teachers' meeting). pH meters: How they work and keeping them working. *Institute of Fundamental Sciences, Massey University*, May 1, Palmerston North, NZ.
- McKelvie, J., Lambert, R. K., Eccles, C. D., Signal, A. I., Barnes, G. R. G., & Bowling, M. C. (1998). Secondary teachers physics evening. *Institute of Fundamental Sciences (Physics), Massey University*, July 2, Palmerston North, NZ.
- Parry, D. A. D. (1998). Auckland Institute of Technology Accreditation Panel. *NZQA*. October/November, Auckland and Palmerston North, NZ.
- van Melse, J., & Bowling, M. (1998). (Catch-up courses in chemistry and physics). *Certech Summer School, Massey University*, January/February, Massey University, Palmerston North, NZ.
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Edwards, H. P. (1998). Confessions of a scholarship examiner. *New Zealand Statistical Association Annual Conference*, September 4, Massey University, Palmerston North, NZ.

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- Hunter, J. J. (1998). Massey University at Albany: The development of a new campus. *Rotary Club of North Shore City*, May 11, Takapuna, North Shore, Auckland, NZ.
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- Cowpertwait, P. S. P. (1998). A stochastic rainfall generator for Sweden. *Water Research Centre, England*.
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2 Books authored by staff members

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14 Extension activities

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Clemens, J. (1998). (Chair of Workshop). Development issues workshop. *New Zealand Nursery and Garden Industry Association*, July 29, Palmerston North, NZ.

Honey, N. K. (1998). (Siemens Science School). *Genetics laboratory class*, July 9, Massey University, Palmerston North, NZ.

Honey, N. K., & Epp, C. D. (1998). (Advisory Committee). Genes exhibition. *Manawatu Science Centre*, Palmerston North, NZ.

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O'Toole, P. W. (1998). (Chief Convenor of Meeting). *Joint Annual Meeting, New Zealand Microbiological Society and the New Zealand Society for Biochemistry and Molecular Biology*, December, Masterton, NZ.

Schmid, J. (1998). (Committee Member). *Joint Annual Meeting, New Zealand Microbiological Society and the New Zealand Society for Biochemistry and Molecular Biology*, December, Masterton, NZ.

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Scott, D. B. (1998). (Seminar). New organism application: Issues to consider. *Environmental risk management: The new institutional framework: Environmental Risk Management Authority*, June 18, Waipuna International Hotel, Auckland, NZ.

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15 Addresses to community organisations

Jameson, P. E. (1998). Concepts, myths and realities of gene technology and food. *Gene Pool*, September 15, Massey University, Palmerston North, NZ.

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Jameson, P. E. (1998). Genetic engineering. *Manawatu WEA*, April 2, Science Centre, Palmerston North, NZ.

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Outred, H. A. (1998). Biology of New Zealand native seeds and the importance of seed banks. *Rangitikei Forest and Bird Society*, February 13.

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16 Professional consultancies

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- Jameson, P. E. (1998). Boysenberry decline. *Tauranga Farmers*, October 28.
- Large, M. F. (1998). Filming West Coast, South Island: Punakaiki, Harihari, Bruce Bay. Programmes 2 and 3. *BBC*, February 28-March 26.
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17 Radio, television and print interviews

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- Garrick, D. J. (1998). Detecting QTL for the New Zealand dairy industry. *Scientists in the Palmerston North catchment*, July 17, Massey University, Palmerston North, NZ.
- Garrick, D. J. (1998). Detecting QTL for the New Zealand dairy industry. *Scientists in the Waikato catchment*, August 6, Ruakura Agricultural Centre, Hamilton, NZ.
- Garrick, D. J. (1998). Determination of breeding objectives. *Forest Research staff and industry parties*, September 24, Rotorua, NZ.
- Garrick, D. J. (1998). Developing and targeting animal breeding and genetics expertise to Irish agricultural problems. *Teagasc*, August 25, Moorepark Research Station, Fermoy, Ireland.
- Garrick, D. J. (1998). Experimental designs for detecting QTL in the New Zealand dairy industry. *New Zealand Society of Animal Production Annual Conference*, June 22, Massey University, Palmerston North, NZ.
- Garrick, D. J. (1998). Finding and exploiting QTL: An animal breeding viewpoint. *Molecular Genetics Information in Animal and Plant Breeding Conference*, September 3, Wageningen University, The Netherlands.
- Garrick, D. J. (1998). The Forest Range Merino Breeding Programme. *World Merino Congress Field Day*, March 26, Forest Range Station, Tarras, NZ.
- Garrick, D. J. (1998). Future plans for the genetic improvement of dairy cattle using molecular approaches. *MILQTL Review Team*, September 6, Oosterbeek, The Netherlands.
- Garrick, D. J. (1998). Genetic aspects to targeting meat market specifications. *Caja Notarial Crossbreeding Programme Annual Review*, August 21, Montevideo, Uruguay.
- Garrick, D. J. (1998). Genetic improvement of dairy cattle. *AgResearch Dairy Science group*, June 10, Ruakura, Hamilton, NZ.
- Garrick, D. J. (1998). Identifying capability needs in animal breeding and genetics. *Teagasc Senior Executives*, April 16, Moorepark, Fermoy, Ireland.
- Garrick, D. J. (1998). The ISIS genetic engine. *Development Team of the Information System for Individual Sheep*, March 13, .
- Garrick, D. J. (1998). The Jersey-Friesian QTL trial. *Jersey Industry Matters Policy Group*, September 29, Newstead, NZ.
- Garrick, D. J. (1998). Lactose and animal evaluation. *Expert Working Group Industry Forum*, February 12, Newstead, NZ.

- Garrick, D. J. (1998). The potential benefits of knowing the pregnancy status of ewes. *28th Sheep and Beef Cattle Veterinarians Meeting*, February 13, Dunedin, NZ.
- Garrick, D. J. (1998). Presidential address: The future of the Society. *New Zealand Society of Animal Production Annual Conference*, June 22, Massey University, Palmerston North, NZ.
- Garrick, D. J. (1998). Tomorrow's cows: Some Kiwi cows of the future. *Teagasc Senior Executives*, April 16, Moorepark, Fermoy, Ireland.
- Guilford, W. G. (1998). Acute pancreatitis and exocrine pancreatic insufficiency. *Australian Small Animal Veterinary Association 25th Annual Conference*, October 18-23, Hobart, Tasmania, Australia.
- Guilford, W. G. (1998). Adverse reactions to food. *Norwegian Veterinary Medical Association*, March 21, Bergen, Norway.
- Guilford, W. G. (1998). Diagnostic approach to chronic diarrhoea. *Australian Small Animal Veterinary Association 25th Annual Conference*, October 18-23, Hobart, Tasmania, Australia.
- Guilford, W. G. (1998). Diagnostic approach to chronic diarrhoea. *Norwegian Veterinary Medical Association*, March 19, Bergen, Norway.
- Guilford, W. G. (1998). Diagnostic approach to chronic vomiting. *Australian Small Animal Veterinary Association 25th Annual Conference*, October 18-23, Hobart, Tasmania, Australia.
- Guilford, W. G. (1998). Diagnostic approach to chronic vomiting. *Norwegian Veterinary Medical Association*, March 19, Bergen, Norway.
- Guilford, W. G. (1998). Diagnostic approach to liver disease. *Norwegian Veterinary Medical Association*, March 21, Bergen, Norway.
- Guilford, W. G. (1998). Gastrointestinal obstruction: Diagnosis and medical management. *Australian Small Animal Veterinary Association 25th Annual Conference*, October 18-23, Hobart, Tasmania, Australia.
- Guilford, W. G. (1998). Gastrointestinal obstruction: Diagnosis and medical management. *Norwegian Veterinary Medical Association*, March 19, Bergen, Norway.
- Guilford, W. G. (1998). Inflammatory bowel disease. *Australian Small Animal Veterinary Association 25th Annual Conference*, October 18-23, Hobart, Tasmania, Australia.
- Guilford, W. G. (1998). Inflammatory bowel disease. *Norwegian Veterinary Medical Association*, March 19, Bergen, Norway.
- Guilford, W. G. (1998). Irritable bowel syndrome. *Australian Small Animal Veterinary Association 25th Annual Conference*, October 18-23, Hobart, Tasmania, Australia.
- Guilford, W. G. (1998). Irritable bowel syndrome. *Norwegian Veterinary Medical Association*, March 20, Bergen, Norway.
- Guilford, W. G. (1998). Management of breed-associated chronic liver diseases. *Australian Small Animal Veterinary Association 25th Annual Conference*, October 18-23, Hobart, Tasmania, Australia.
- Guilford, W. G. (1998). Management of the food sensitive cat. *16th American College of Veterinary Internal Medicine Forum*, May 22, San Diego, Calif., USA.
- Guilford, W. G. (1998). Management of liver disease. *Norwegian Veterinary Medical Association*, March 21, Bergen, Norway.
- Guilford, W. G. (1998). Medical management of gastric dilatation-volvulus. *Norwegian Veterinary Medical Association*, March 20, Bergen, Norway.
- Guilford, W. G. (1998). Motility disorders of the gastrointestinal tract. *Australian Small Animal Veterinary Association 25th Annual Conference*, October 18-23, Hobart, Tasmania, Australia.
- Guilford, W. G. (1998). Motility disorders of the gastrointestinal tract. *Norwegian Veterinary Medical Association*, March 20, Bergen, Norway.

- Guilford, W. G. (1998). Nutritional management of gastrointestinal tract diseases. *Australian Small Animal Veterinary Association 25th Annual Conference*, October 18-23, Hobart, Tasmania, Australia.
- Guilford, W. G. (1998). Nutritional management of gastrointestinal tract diseases. *Norwegian Veterinary Medical Association*, March 21, Bergen, Norway.
- Guilford, W. G. (1998). Symptomatic treatment of acute gastroenteritis. *Australian Small Animal Veterinary Association 25th Annual Conference*, October 18-23, Hobart, Tasmania, Australia.
- Guilford, W. G. (1998). Symptomatic treatment of acute gastroenteritis. *Norwegian Veterinary Medical Association*, March 20, Bergen, Norway.
- Guilford, W. G. (1998). Update of pancreatic diseases. *Norwegian Veterinary Medical Association*, March 21, Bergen, Norway.
- Guilford, W. G. (1998). What constitutes a GI workup? *16th American College of Veterinary Internal Medicine Forum*, May 23, San Diego, Calif., USA.
- Guilford, W. G. (1998). What constitutes a hypoallergenic diet? *Norwegian Veterinary Medical Association*, March 21, Bergen, Norway.
- Hunter, J. E. B. (1998). Pathogenic and potentially zoonotic bacteria isolated from marine mammals in New Zealand. *Society for Marine Mammalogy and European Cetacean Society*, January 24, World Marine Mammal Science Conference, Monaco.
- Ishii, S., Kobayashi, M., & Cockrem, J. F. (1998). Effects of starvation on gonadotropin and thyrotropin gene expressions in birds: An experimental study with the Japanese quail. *Japanese Ornithological Society Annual Meeting*, November 21-22, Kita-Kyushu, Japan.
- Jolly, R. D. (1998). The ceroid-lipofuscinoses of animals. *Department of Veterinary Pathology, University of Colorado*, May 5, Fort Collins, Colo., USA.
- Jolly, R. D. (1998). Ovine ceroid-lipofuscinosis: Classification and mechanisms of degeneration. *8th International meeting on the ceroid-lipofuscinoses*, June 21, Southwestern Medical School, Dallas, Texas, USA.
- Kendrick, C. (1998). Donation screening for antibody to *Yersinia enterocolitica* among Manawatu blood donors. *New Zealand Institute of Medical Laboratory Science*, September 3, Palmerston North Convention Centre, NZ.
- Kendrick, C. (1998). Transfusion induced endotoxic shock caused by *Yersinia enterocolitica* in New Zealand. *Abbott Diagnostics Division, Chicago, Illinois, USA*, February 10, Abbott Park, Illinois, USA.
- Kobayashi, M., Kikuchi, M., Cockrem, J. F., & Ishii, S. (1998). Changes in relative pituitary contents of gonadotrophin and thyrotropin subunit mRNAs during starvation and subsequent feeding. *Japanese Avian Endocrinology Society 23rd Annual Meeting*, October 18-19, Aomori Prefecture, Japan.
- Lugton, I. W., Wilson, P. R., Sauter, C., & Morris, R. S. (1998). Epidemiological observations of *Mycobacterium bovis* in farmed and feral red deer. *International Deer Biology Conference*, July 1998, Kaposvár, Hungary.
- Machon, R. (1998). Advances in anaesthesia: Oxygen-carrying solutions: An introduction. *Patron's Day, Institute of Veterinary, Animal and Biomedical Sciences*, December 11, Massey University, Palmerston North, NZ.
- Machon, R. (1998). Anaesthesia for compromised patients. *New Zealand Veterinary Association Wellington Branch Veterinary Anaesthesia Seminar*, November 8, Wellington, NZ.
- Machon, R. (1998). Analgesic agents and adjunctive methods of pain control. *New Zealand Veterinary Association Wellington Branch Veterinary Anaesthesia Seminar*, November 8, Wellington, NZ.

- Machon, R. (1998). A brief introduction to isoflurane and sevoflurane. *New Zealand Veterinary Association Wellington Branch Veterinary Anaesthesia Seminar*, November 8, Wellington, NZ.
- Machon, R. (1998). Inhalational agents and human safety. *New Zealand Veterinary Association Wellington Branch Veterinary Anaesthesia Seminar*, November 8, Wellington, NZ.
- Machon, R. (1998). Monitoring equipment: A review. *New Zealand Veterinary Association Wellington Branch Veterinary Anaesthesia Seminar*, November 8, Wellington, NZ.
- Machon, R. (1998). Premedication: A review. *New Zealand Veterinary Association Wellington Branch Veterinary Anaesthesia Seminar*, November 8, Wellington, NZ.
- Machon, R. (1998). Veterinary intensive care: An introduction. *The Australian and New Zealand Intensive Care Society*, April 1, Palmerston North, NZ.
- Matthews, P. N. P. (1998). The concept of net pasture production. *Yunnan Animal Husbandry Bureau*, September 23, Xiao Shao, Yunnan Province, China.
- Matthews, P. N. P. (1998). Course evaluation. *Yunnan Animal Husbandry Bureau*, September 30, Xiao Shao, Yunnan Province, China.
- Matthews, P. N. P. (1998). The development of pasture based grazing systems in Southern China: Problems and opportunities. *Pasture development in Southern China conference*, October 9, Hang Ya, Sichuan Province, China.
- Matthews, P. N. P. (1998). The effect of grazing management on pasture and animal production in late autumn to early spring period in a one year bull beef grazing system. *New Zealand Society of Animal Production*, June 22-25, Massey University, Palmerston North, NZ.
- Matthews, P. N. P. (1998). Experiences with group teaching and oral assessment of students. *Massey University Training and Development Unit*, June 26, Massey University, Palmerston North, NZ.
- Matthews, P. N. P. (1998). Feed planning. *Yunnan Animal Husbandry Bureau*, September 28-29, Xiao Shao, Yunnan Province, China.
- Matthews, P. N. P. (1998). Growing management: An introduction to feed planning. *Yunnan Animal Husbandry Bureau*, September 26, Xiao Shao, Yunnan Province, China.
- Matthews, P. N. P. (1998). Internationalisation at Massey University: Showcase 1: The UNDP project in Southern China. *Research team from IDP Education, Australia and the New Zealand Ministry of Education*, April 2, Massey University, Palmerston North, NZ.
- Matthews, P. N. P. (1998). Livestock production from pastures: Basic management principles. *Yunnan Animal Husbandry Bureau*, May 6, Xiao Shao, Yunnan Province, China.
- Matthews, P. N. P. (1998). Livestock production from pastures: Feed profile workshop. *Yunnan Animal Husbandry Bureau*, May 6, Xiao Shao, Yunnan Province, China.
- Matthews, P. N. P. (1998). Livestock production from pasture: The New Zealand experience. *Yunnan Animal Husbandry Bureau*, May 5, Xiao Shao, Yunnan Province, China.
- Matthews, P. N. P. (1998). Pasture management to achieve farming targets. *Gisborne Sheep Farmers*, July 23, Massey University, Palmerston North, NZ.
- Matthews, P. N. P. (1998). Recent advances in grazing management for higher per cow and per hectare production. *Intelact Farm Consultants*, June 4, Massey University, Palmerston North, NZ.
- Matthews, P. N. P. (1998). Recent advances in grazing management: Pasture targets in practice. *Intelact Farm Consultants*, June 5, Bulls, NZ.
- Morris, S. T., Matthews, P. N. P., & Charteris, P. L. (1998). Produção de carne bovina em pastagens na Nova Zelândia. *Fundepec conference on repensando a Pecuaria de Corte 'Experiencias Internacionais'*, August 20-21, São Paulo, Brazil.
- Olczak, J. (1998). The epidemiology aspects of feline hyperthyroidism in United States and New Zealand. *University College Dublin, Faculty of Veterinary Medicine, Veterinary College*, November 24, Ballsbridge, Dublin, Ireland.

- Olczak, J. (1998). Epidemiology of feline hyperthyroidism. *C-Vet (NZ) 1998 Summer Symposium on Focus on Endocrine Disorders*, March 6, 13, Christchurch and Taupo, NZ.
- Parker, W. J. (1998). Adoption of technology and information on New Zealand dairy farms. *Annual Conference of the Agricultural and Resource Economics Society*, July 3, Blenheim, NZ.
- Parker, W. J. (1998). Farmer knowledge and perceptions concerning farm forestry: A Wairarapa case study. *Annual Conference of the Agricultural and Resource Economics Society*, July 4, Blenheim, NZ.
- Parker, W. J. (1998). Sheep breeding: An enterprise budgeting decision support model for on-farm planning. *New Zealand Society of Animal Production Conference*, June 24, Massey University, Palmerston North, NZ.
- Parker, W. J. (1998). Student experiences as farm employees during their programme practicum. *Annual Conference of the Agricultural and Resource Economics Society*, July 4, Blenheim, NZ.
- Parton, K. H. (1998). Research and teaching in benefits and features of different employment options. *Prelude to Practice, New Zealand Veterinary Association*, September 17, Massey University, Palmerston North, NZ.
- Perkins, N. R. (1998). Effect of administration of a GnRH antagonist (cetrorelix) on peripheral blood concentrations of immunoactive LH in long term castrated geldings. *Annual Meeting for Society for Theriogenology*, December 4-6, Baltimore, Maryland, USA.
- Perkins, N. R. (1998). Equine abdominal ultrasonography. *Workshop on Equine Ultrasonography, Foundation for Continuing Education, New Zealand Veterinary Association*, March 21-22, Massey University, Palmerston North, NZ.
- Perkins, N. R. (1998). Equine reproductive ultrasonography. *Workshop on Equine Ultrasonography, Foundation for Continuing Education, New Zealand Veterinary Association*, March 21-22, Massey University, Palmerston North, NZ.
- Perkins, N. R. (1998). How to design a successful equine epidemiological research study. *Epidemiological Workshop for Equine Research Workers*, April 16-17, Veterinary Conference Centre, University of Sydney.
- Perkins, N. R. (1998). Human chorionic gonadotropin: The effect of dose and repeated use on ovulation, pregnancy rate and twinning of thoroughbred horses. *Annual Meeting for Society for Theriogenology*, December 4-6, Baltimore, Maryland, USA.
- Pfeiffer, D. U. (1998). Development of simulation models using spreadsheet software. *Royal Veterinary and Agricultural University*, Copenhagen, December 22, Copenhagen, Denmark.
- Pfeiffer, D. U. (1998). Epidemiological data collection and analysis in prevention and control of animal diseases. *Danske Slagterier*, December 22, Copenhagen, Denmark.
- Pfeiffer, D. U. (1998). Epidemiological data collection and analysis in prevention and control of animal diseases. *Royal Veterinary College, University of London*, December 17, London, England.
- Pfeiffer, D. U. (1998). Epidemiological data collection and analysis in prevention and control of animal diseases. *Veterinary Faculty, Iowa State University*, December 10, Ames, Iowa, USA.
- Pfeiffer, D. U. (1998). Internet for veterinarians. *'Vets on the Net' Course for Foundation for Veterinary Continuing Education of the New Zealand Veterinary Association*, January 29-30, Auckland, NZ.
- Pfeiffer, D. U. (1998). Internet for veterinarians. *'Vets on the Net' course for Foundation for Veterinary Continuing Education of the New Zealand Veterinary Association*, July 16-17, Nelson.
- Pfeiffer, D. U. (1998). Introduction to the World Wide Web. *'Vets on the Net' course for Foundation for Veterinary Continuing Education of the New Zealand Veterinary Association*, January 29-30, Auckland, NZ.

- Pfeiffer, D. U. (1998). Use of electronic mail. *'Vets on the Net' course for Foundation for Veterinary Continuing Education of the New Zealand Veterinary Association*, January 29-30, Auckland, NZ.
- Pfeiffer, D. U. (1998). Use of electronic news-groups. *'Vets on the Net' course for Foundation for Veterinary Continuing Education of the New Zealand Veterinary Association*, January 29-30, Auckland, NZ.
- Pfeiffer, D. U. (1998). What we know so far: Epidemiology of Neospora. *Livestock Improvement Corporation*, August 12, Hamilton, NZ.
- Russell, D., & Matthew, C. (1998). An evaluation of pasture dry matter response to Nitrosol liquid fertiliser applied to pasture in late winter and early spring. *New Zealand Agronomy Society*, August 25, Hawkes Bay, NZ.
- Scuffham, A. (1998). Anaesthesia of a dangerous patient. *New Zealand Society of Anaesthetic Technicians*, August, Dunedin, NZ.
- Scuffham, A. (1998). Managing a blood bank for animals. *New Zealand Society of Anaesthetic Technicians*, August, Dunedin, NZ.
- Skinner, S. J. M., Batchelor, D. C., Cockrem, J. F., Vickers, M., & Lewis, R. M. (1998). Abnormal fetal endocrine development in the spontaneously hypertensive rat. *New Zealand Society for Endocrinology Annual Conference*, November 12, Massey University, Palmerston North, NZ.
- Stark, K., Morris, R. S., Benard, H. J., & Stern, M. W. (1998). EpiMAN-SF: A decision-support system for managing swine fever epidemics. *Office International des Épizooties Symposium on Classical Swine Fever*, July 9-10, Birmingham, England.
- Williamson, N. B. (1998). Advance palpation and reproduction. *Preconference seminar, 20th World Buiatrics Congress*, July 5, Sydney, Australia.
- Williamson, N. B. (1998). *Neospora caninum* research in New Zealand: Progress to date and proposals for future research. *Livestock Improvement Corporation*, August 12, Hamilton, NZ.
- Wilson, P. R. (1998). The enigma of copper in deer. *International Deer Biology Conference*, July, Kaposvár, Hungary.
- Wilson, G. F. (1998). Fertilisers, pastures and animal performance. *Fertilisers and Soil Fertility Management Conference*, July 2, Massey University, Palmerston North, NZ.
- Wilson, G. F. (1998). Fertilisers, pastures and animal performance. *Fertilisers and Soil Fertility Management Conference*, December 3, Massey University, Palmerston North, NZ.
- Wilson, P. R. (1998). Reproductive performance, risk factors and management decisions. *New Zealand Veterinary Association Deer Branch Conference*, February 9-11, Dunedin, NZ.
- Wilson, P. R., & Audige, L. J-M. (1998). Measurement of productivity on commercial deer farms. *International Deer Biology Conference*, July, Kaposvár, Hungary.

14 Extension activities

- Burbidge, H. M. (1998). (Workshop). Diagnostic imaging. *Australasian Association of Veterinary Diagnostic Imaging*. October 29-30, Auckland, NZ.
- Burbidge, H. M. (1998). (Weekend workshop). Postgraduate module in equine ultrasonography. *New Zealand Veterinary Association Foundation for Continuing Education*. March 21-22, Palmerston North, NZ.
- Burbidge, H. M. (1998). (Weekend workshop). Postgraduate module in small animal ultrasonography. *New Zealand Veterinary Association Foundation for Continuing Education*. March 28-29, Palmerston North, NZ.
- Callow, C. (1998). Performance recording workshops. *New Zealand Sheepbreeders' Association*. June 22, Gore, NZ.

- Callow, C. (1998). Performance recording workshops. *New Zealand Sheepbreeders' Association*. June 23, Timaru, NZ.
- Callow, C. (1998). Performance recording workshops. *New Zealand Sheepbreeders' Association*. June 24, Christchurch, NZ.
- Callow, C. (1998). Performance recording workshops. *New Zealand Sheepbreeders' Association*. June 25, Palmerston North, NZ.
- Callow, C. (1998). Performance recording workshops. *New Zealand Sheepbreeders' Association*. June 26, Hamilton, NZ.
- Callow, C. (1998). Performance recording workshops. *New Zealand Sheepbreeders' Association*. July 16, Mosgiel, NZ.
- Firth, E. C. (1998). (Presentation). Copper in the horse: Bone growth in horses. *New Zealand Thoroughbred Breeders Association (Manawatu Central District Branch)*. June 18, Awapuni Racecourse, Palmerston North, NZ.
- Hunter, J. E. B. (1998). (2 day visit by school children). Visit to watch seal and discuss behaviour and biology. *Hokowhitu Primary School, Palmerston North*. August, Institute of Veterinary, Animal and Biomedical Sciences, Massey University, Palmerston North, NZ.
- Lapwood, K. R. (1998). *New Zealand Society of Endocrinology Annual Scientific Meeting, New Zealand Society of Endocrinology*. November 12-13, Massey University, Palmerston North, NZ.
- Matthews, P. N. P. (1998). (New Zealand study tour for FIEAG: Farmers Cooperative Federation). *Goais State and ESQ-University of São Paulo, São Paulo State, Brazil*. January 25-February 8, São Paulo, Brazil.
- Matthews, P. N. P. (1998). (Training course). *Yunnan Provincial Animal Husbandry Bureau, Yunnan Provincial Animal Husbandry Bureau*. September 22-30, Xiao Shao, Yunnan Province, China.
- Norman, R. (1998). (Wildlife Coordinator). National Tier 3 Oil Spill Response. October 9, 1998-January 1999, Invercargill and Stewart Island, NZ.
- Norman, R. (1998). (Lecture). Wildlife response. *Maritime Safety Authority Oil Spill Management Course*. December 9, Auckland, NZ.
- Parker, W. J. (1998). Dairy farm business management: Strategy and control. *Dairy Business Focus Forums*. July 21-23, Yinnar, Maffra, Leongatha, Warragul, Gippsland, Victoria, Australia.
- Parker, W. J. (1998). The dairy industry: Looking ahead. *Dairy Industry Summit*. June 25, Palmerston North, NZ.
- Parker, W. J. (1998). (Dairy Farmers' Field Day). Farm business planning. March 19, Ruakura, NZ.
- Parker, W. J. (1998). (Chief Judge Comments). Farmers' Mutual Excellence Award. *Farmers' Mutual Group*. April 21, Napier, NZ.
- Parker, W. J. (1998). (Chief Judge). Farmers' Mutual Rural Excellence (A C Cameron) Award. *Farmers Mutual Group*. April 2-7.
- Parker, W. J. (1998). (Conference). Innovation, opportunity and change: Thinking differently about management on beef cattle farms. *Mid Northern Beef Council*. April 15, Te Kuiti, NZ.
- Parker, W. J. (1998). Planning for farm business growth. *Southern North Island Sheep and Beef Cattle Conference*. June 23, Feilding, NZ.
- Parker, W. J. (1998). (Bank of New Zealand rural clients seminar). Planning to increase certainty in an uncertain future. *Bank of New Zealand, Hawkes Bay Region*. June 3, Hastings, NZ.
- Parker, W. J. (1998). (Sharemilkers Conference). Preparing for the next five years in dairying: Issues and opportunities. February 4, Pahiatua, NZ.
- Parker, W. J., Stantiall, J. D., & Shadbolt, N. M. (1998). Preferred future. *Dairy Farm Business Management Workshops*. April 16, 21, 23, 28, Awahuri, NZ.
- Pomroy, W. E. (1998). (Workshop on Neospora - lecture to selected farmers, representatives from Federated Farmers, Livestock Improvement Corporation, New Zealand Dairy Group and

- interested veterinarians). Neospora: Outline on its biology. *Livestock Improvement Corporation*. August 12, Hamilton, NZ.
- Sauter-Louis, C., & Morris, R. S. (1998). (Meeting with farmers). On-farm tuberculosis control programme. *EpiCentre, Massey University*. May 14, Castlepoint, Wairarapa, NZ.
- Stantiall, J. D. (1998). (Field day). Calving date systems comparison second annual field day. *Agricultural Services*. November 12, Massey University No. 1 Dairy Farm, Palmerston North, NZ.
- Stantiall, J. D. (1998). (Workshop). Extension in the New Zealand dairy industry. *Livestock Improvement Advisory (Taranaki)*. November 18, Massey University, Palmerston North, NZ.
- Stantiall, J. D., Parker, W., & Kuiper, D. (1998). (Continuing Education in Agriculture Workshop). Building management skills to compete for the future: A mini-workshop. *Southern North Island Sheep and Beef Cattle Farmers' Conference*. June 23, Feilding, NZ.
- Thompson, K. G. (1998). (Cytology Workshop). Practical Cytology Stage 1. *New Zealand Veterinary Association Foundation for Continuing Education*. April 16-17, Massey University, Palmerston North, NZ.
- Wilson, G. F. (1998). (Address and workshop to Pahiatua dairyfarmers). Solving magnesium deficiency problems in dairy herds. *FORST project*. June 24, Pahiatua, NZ.
- Wilson, G. F., & Stevenson, M. (1998). (Field day presentation). Mineral supplementation and the role of DCAD. *Continuing Education in Agriculture*. February 11, Massey University No. 4 Dairy Unit, Palmerston North, NZ.
- Wilson, P. R. (1998). (Workshop). Deer herd productivity and product quality. *International Deer Biology Conference*. July 1998, Kaposvár, Hungary.
- Wilson, P. R. (1998). (Seminar). Deer research at Massey University. *Veterinary School, University of Dublin*. June, Dublin.
- Wilson, P. R. (1998). (Seminar). Massey University Deer Research Programme. *Institute of Virology and Immunoprophylaxis*. June, Mittelhaeusern, Switzerland.
- Wilson, P. R. (1998). Parasite control on deer farms. *New Zealand Deer Farmers Conference*. June 1998, Rotorua, NZ.
- Wilson, P. R. (1998). (Field day). Reproduction and drought management. *Deer-master project*. February 18, South Canterbury, NZ.
- Wilson, P. R. (1998). (Field day). Reproduction and drought management. *Hawkes Bay Deer Performance project*. February 13, Waipukurau, NZ.
- Wilson, P. R. (1998). (Discussion). Research options for funding. *Manawatu Deer Farmers Association*, March 9, Ashhurst, NZ.
- Wilson, P. R. (1998). (Seminar). Tb in farmed deer and its control. *University of Berne, Switzerland*. June, Berne, Switzerland.

15 Addresses to community organisations

- Blair, H. T. (1998). Is there a future for the Romney? *New Zealand Romney Development Sheep Breeders*, February 9, Bendall Stud, Wairarapa, NZ.
- Blair, H. T. (1998). Making real progress with crossbreeding. *Agriculture New Zealand*, July 23, Dannevirke, NZ.
- Blair, H. T. (1998). New Zealand sheep genetics. *Victorian Merino Breeders*, April 3, Massey University, Palmerston North, NZ.
- Blair, H. T. (1998). Opportunities in university education. *Palmerston North Boys' High School, Palmerston North Girls' High School and Nga Tawa High School*, June 25, Palmerston North, NZ.

- Firth, E. C. (1998). How exercise affects and damages tissues. *Wellington Area Horse Trials*, November 11, Wellington, NZ.
- Forsyth, S. F. (1998). Care of pets. *Tiritea Primary School*, September 23, Tiritea Primary School, Palmerston North, NZ.
- Madie, P. (1998). Scientific whaling. *Worldwide Fund for Nature*, March 2, Wellington Town Hall, Wellington, NZ.
- Matthews, P. N. P. (1998). *AGMARDT Farmer's Discussion Group*, March 13, Feilding, NZ.
- Matthews, P. N. P. (1998). *AGMARDT Farmers' Discussion Group*, May 15, Feilding, NZ.
- Matthews, P. N. P. (1998). *AGMARDT Farmers Discussion Group*, July 24, Feilding, NZ.
- Matthews, P. N. P. (1998). *AGMARDT Farmers Discussion Group*, September 18, Feilding, NZ.
- Matthews, P. N. P. (1998). *AGMARDT Farmers Discussion Group*. December 18, Bulls, NZ.
- Matthews, P. N. P. (1998). Dairy production from pastures. *Southern Brazilian Group*, January 20, Pahiatua, NZ.
- Matthews, P. N. P. (1998). Dairy production from pastures: Grazing management principles. *Brazilian Agricultural Group*, February 3, Christchurch, NZ.
- Matthews, P. N. P. (1998). Grazing management: The New Zealand experience. *Chinese Bureau Foreign Experts Group*, November 26, Massey University, Palmerston North, NZ.
- Matthews, P. N. P. (1998). Grazing management in practice. *Chinese Bureau Foreign Experts Group*, November 27, Woodville, NZ.
- Matthews, P. N. P. (1998). Grazing management principles. *Milk Production from Pasture Workshop for Chilean and Costa Rican Group*, October 19, Massey University, Palmerston North, NZ.
- Matthews, P. N. P. (1998). Introduction to New Zealand farming systems. *Brazilian Agricultural Group*, January 27, Hamilton, NZ.
- Matthews, P. N. P. (1998). Livestock production from pasture: Basic principles. *Brazilian Agricultural Group*, January 28, Hamilton, NZ.
- Matthews, P. N. P. (1998). Livestock production from pasture: Grazing management principles. *American Farmers Group*, January 5, Massey University, Palmerston North, NZ.
- Matthews, P. N. P. (1998). Livestock production from pastures: Grazing management principles. *Argentine Large Herd Owners Group*, November 6, Massey University, Palmerston North, NZ.
- Matthews, P. N. P. (1998). Pasture assessment and feed management in practice. *Milk Production from Pasture Workshop for Chilean and Costa Rican Group*, October 20, Massey University, Palmerston North, NZ.
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