

Mr Stephen Wotton MBE, HNC, MSc.

Senior Lecturer in Farm Animal Science

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Qualifications:

MSc Meat Science, University of Bristol 2000
IRCA qualified Internal Quality Auditor 2000
C & G 222 Electronic Applications Weston-super-Mare Polytechnic 1979
HNC Applied Biology, Bristol Polytechnic 1976

Personal interests

My research is in the area of behaviour and physiology in farmed animal species. The aim of the research is to improve animal welfare during the period from farm through to slaughter with particular emphasis on the physiology of humane stunning and slaughter. The research draws on theory, techniques and principles from behavioural ecology, cognitive science and neuroscience. I pioneered the early research with Neville Gregory into the use of averaged brain evoked potentials for the study of pre-slaughter stunning and slaughter, techniques which remain in use by many laboratories around the world.

I am a Principal Investigator for stunning and slaughter research projects and work with a research group that is flexible to the demands of the research area and includes members of Veterinary Public Health and the Animal Welfare and Behaviour group.

I have been involved in welfare research, teaching and training for many years and manage the delivery of Animal and Poultry Welfare Officer training courses in the UK and elsewhere. I have worked in collaboration with Hall Mark Meat Hygiene Ltd. to provide a large number of Official Veterinarians (OVs) contracted to the FSA with high quality distance learning material.

I am currently a member of the Farm Animal Welfare Committee (FAWC). The Committee provides advice to Defra and the Devolved Administrations in Scotland and Wales on the welfare of farmed animals, including farmed animals on agricultural land, at market, in transit and at the place of killing. I was a partner in the EUWelNet project (<http://www.euwelnet.eu/euwelnet>), which evaluated the feasibility and usefulness of a network that could assist the competent authorities and stakeholders in implementing EU legislation on animal welfare.

Honours and Prizes

- 2012** Member of the stunning and slaughter group at the University of Bristol that was awarded the Humane Slaughter Association's 'John Ace-Hopkin Award' in recognition of significant advances in the humane slaughter of farmed livestock.
- 2007** **Member of the Order of the British Empire (MBE) for services to animal welfare in the UK and the world.**
- 2006** The BSAS / RSPCA award, which was presented to AWTraining for: "Outstanding contributions to scientific research, information transfer and training in the area of farm animal welfare at stunning and slaughter".
- 1990** Part of the Bristol Welfare Group that was awarded the BSAP/RSPCA Award for innovation in animal welfare research.
- 1986** The Langley Prize presented for the best scientific paper published in the Journal of the Association of Veterinary Anaesthetists.
- 1985** The George Flemming Prize from the British Veterinary Association for a three-part article written with Dr. N.G. Gregory on Sheep Slaughtering Procedures.

Selected Recent Funding

- 01/03/2014 – 31/03/2015** **Alberta Government, Growing Forward 2**Zephyr Euthanasia Tool EEG Assessment. £73,862
- 01/03/2013 – 01/03/2015** **Defra** Study to investigate non-penetrating percussive blow to the head as a humane killing method for piglets, kids and lambs up to 5 kg. £184,628
- 01/11/12 - 1/12/13** **EBLEX** A comparison of sheep handling methods relevant to halal slaughter £12,000
- 01/07/08 – 01/02/10** **Defra LINK.** Head only stunning of poultry: avoiding the welfare/quality conflict, £142,000

Selected Recent Publications

- Rizvan Khalid, Toby Knowles & **Steve Wotton**. (2014). A Comparison of Blood Loss at Exsanguination of Lamb between the Halal slaughter methods of Traditional Slaughter without stunning, Electric Head-Only Stunning and Post-Cut Electric Head-Only Stunning. *Animal Welfare*. Submitted
- Mpamhanga, C.J. and **Wotton, S.B.** (2014) The Effects of Pre-Slaughter Restraint (for the purpose of cattle identification) on Post-Slaughter Responses and Carcass Quality following the Electrical Stun/killing Of Cattle in a Jarvis Beef Stunner. *Animal Welfare*. Submitted
- Wotton SB**, Zhang X, McKinstry JJ, Velarde A, Knowles TG. (2014) The effect of the required current/frequency combinations (EC 1099/2009) on the incidence of cardiac arrest in broilers stunned and slaughtered for the halal market. *PeerJ PrePrints* 2:e255v1 <http://dx.doi.org/10.7287/peerj.preprints.255v1>
- Lucy Bates, Elizabeth A Ford, Steve N Brown, Gemma J Richards, Phillip J Hadley, **Steve Wotton** and Toby G Knowles. 2014. A Comparison of Pre-Slaughter Handling Methods Relevant to Sheep and Religious Slaughter. *Animal Welfare*. 23: 3. 251-258.
- Rao, M.A., Knowles, T.G. and **Wotton, S.B.** 2013. The Effect of Pre-Stun Shocks in Electrical Waterbath Stunners on Carcass and Meat Quality in Broilers. *Animal Welfare*. 22: 1, 79-84.
- Anastasov, M.I. and **Wotton, S.B.** 2011. Survey of the incidence of post stun behavioural reflexes in electrically stunned broilers in commercial conditions and the relationship of their incidence with the applied water bath electrical parameters. *Animal Welfare* (submitted)
- J.A. Lines, A.B.M. Raj, **S.B. Wotton**, M. O'Callaghan & T.G. Knowles (2011): Head-only electrical stunning of poultry using a waterbath: a feasibility study, *British Poultry Science*, 52:4, 432-438
- J.A. Lines, **S.B. Wotton**, R. Barker, J. Spence, L. Wilkins & T.G. Knowles (2011): Broiler carcass quality using head-only electrical stunning in a waterbath, *British Poultry Science*, 52:4, 439-445
- Weaver, A.L. and **Wotton, S.B.** 2009. The Jarvis Beef Stunner: effects of a prototype chest electrode. *Meat Science* 81 51–56.
- Perez-Palacios S. and **Wotton, S.B.** 2006. Effects of salinity and the use of shackle/leg sprays on the electrical conductivity of a commercial waterbath stunner for broilers. *Veterinary Record* 158 (19): 654-657.
- Wotton, S.B.** 2006. 5.1 Humane Slaughter. In *Integrated Food Safety and Veterinary Public Health*. Edited by S. Buncic. Published by CABI.
- Butterworth, A., Brakes, P., **Wotton, S.B.**, Knowles, T. G., Love, S. & Jepson P. D. 2005. Report of the working group on whale killing methods and associated welfare issues. *Proceedings International Whaling Commission IWC/57/Rep 7 7.1(60)*.
- Wotton, S.B.**, Knowles, T. G., Love, S. & Jepson P. D. 2005. A review of recent Norwegian studies contained in - 'Assessment of insensibility and death in hunted whales. A study of trauma and its consequences caused by the currently used weapons and ammunition in the Norwegian hunt for minke whales, with special emphasis on the central nervous system.' *Proceedings of the International Whaling Commission*. Edited by Butterworth, A. and Brakes, P. *IWC/57/WKM&AWI 10 (80)*
- Galvin, J.W., Blockhius, H., Chimbombi, M.C., Jong, D. and **Wotton, S.B.** 2005. Killing of animals for disease control purposes. In *Animal Welfare global issues, trends and challenges*. *OIE Review*. Vol 24. (2) August 2005 ISSN 0253-1933

(Greater than 100 publications)