

unreasonable or unnecessary pain or distress, and protection from, and rapid diagnosis of, any significant injury or disease. The code takes account of good practice, scientific knowledge and available technology.

The Ministry of Agriculture and Forestry, New Zealand, issued the Animal Welfare (Broiler Chickens: Fully Housed) Code of Welfare 2003 on 25 July 2003. The code is 40 pages in length and it contains six chapters including the introduction, purpose and interpretation of the code; obligations of owners and persons in charge of animals; management of broiler chickens; catching, loading, and transport; quality management; and stockmanship.

The code is intended to encourage all those responsible for its implementation to adopt the highest standards of husbandry, care and handling. Within the code there are sixteen sections on 'minimum standards' and 'recommended best practice'; these include standards relating to hatchery management, food and water, housing, equipment, stocking densities, lighting, ventilation, temperature, litter management, disease and injury control, humane destruction, pre-loading, catching and loading, loading densities, transport crates, and stockmanship.

Animal Welfare (Broiler Chickens: Fully Housed) Code of Welfare 2003 (2003). Published by MAF Biosecurity Authority, Ministry of Agriculture and Forestry, ASB Bank House, 101–103 The Terrace, PO Box 2526, Wellington, New Zealand. 40 pp A4 paperback. Also available on MAF's website: <http://www.maf.govt.nz/biosecurity/animal-welfare>

Trends in the use of primates for scientific procedures in the UK

One of the remits of the UK's Animal Procedures Committee (APC) is to review the use and care of non-human primates under the provisions of the Animals (Scientific Procedures) Act 1986 (ASPA). The committee has recently produced a report on current trends in the use of primates under the ASPA summarising data on primate use in scientific procedures in the UK over an eleven-year period. It identifies significant trends during that period and likely changes to patterns of use in the future. Since the majority of primate use is in pharmaceutical research and development, particularly in regulatory toxicology and other safety assessment procedures, this issue was examined in detail. The report contains seven chapters: an introduction, the analysis of primate use 1990–2000, the use of primates in regulatory toxicology, the future use of primates, conclusions and recommendations and the way forward, an addendum, and references.

According to the report, in the eleven years between 1990 and 2000, 37 317 primates were used in scientific procedures under the ASPA; most were marmosets and tamarins (about 38%) or macaques (about 59%). The major use of primates has been in toxicology procedures including those for pharmaceutical safety and efficacy assessment (about 72%).

The report contains 14 recommendations aimed at reducing primate use in experiments, and is in line with the APC's stated goal of "minimising, and eventually eliminating primate use and suffering". These recommendations include a statement that the development and implementation of non-animal alternatives to replace the use of non-human primates must be accepted within industry and the international regulatory arena as a high priority goal, and that it requires immediate and dedicated attention. The report also makes the recommendation that the instigation of a detailed examination of regulatory policies on species selection in toxicity testing (requiring regulators to justify their need for primate data) is essential and that this should be pursued in the national and international regulatory arenas. Furthermore, the report strongly recommends government support for the concept and practice of human tissue donation

for research. The report urges the pharmaceutical industry, the Home Office and Ethical Review Processes to promote in-house tissue sharing and to further promote tissue banks.

The report indicates that its authors appreciate that some of these recommendations reflect existing practice; it also indicates, however, that they believe that it is not sufficiently widely appreciated (or widely applied from a global perspective) and that greater efforts should be made to make this explicit in codes of good practice and in appropriate documents, reports and publications.

Finally, the authors acknowledge the claim that the excessive bureaucracy (real or perceived) of the existing licensing system, combined with further restrictions on the use of animals, may have the consequence of driving pharmaceutical research and testing currently undertaken in the UK overseas, where welfare standards may be much lower. This risk has to be taken seriously but the point is also made that the argument should not be used uncritically to reduce the level of control or in order to maintain what is thought by others to be an unsatisfactory status quo.

The Use of Primates Under the Animals (Scientific Procedures) Act (1986) (2002). 39 pp. Available on the APC website: <http://www.apc.gov.uk/reference/primates.pdf>

The welfare of farmed animals at slaughter or killing

The UK's Farm Animal Welfare Council (FAWC) was established in 1979 to keep under review the welfare of farm animals on-farm and through to slaughter, and to advise Great Britain's Rural Affairs Ministers on any legislative or other changes that may be necessary. In June 2003, FAWC published its new review of the welfare of 'red meat' animals (mammals), the Council's previous review having been undertaken in the 1980s and published in 1985. Since that time there have been changes: the decline in the number of red meat slaughterhouses has continued (from 999 in 1985 to 367 in 2002), there has been new EC and UK legislation, and the Meat Hygiene Service and the need for an Official Veterinary Surgeon to be present in all slaughterhouses have come into being.

The findings are presented in a section entitled 'The welfare issues' and the subjects covered here include: unloading, lairage, handling of animals prior to stunning, stunning and killing, slaughter, mass killing for exotic disease control, on-farm slaughter or killing, slaughter of deer, ostriches, wild boar, and horses; licensing, training and staffing; legislation and enforcement; and research, development and technology transfer. The report includes a total of 94 recommendations, some 37 of which are recommendations to the Government: others are directed at parts of the industry and to associated bodies such as the Food Standards Authority and the Meat Hygiene Service.

Many of the recommendations are aimed at further ensuring high standards of animal handling, for example through production of advice and guidelines and through more rigorous training and assessment and licensing of those trained. However, the Council concluded that one currently used method for stunning pigs — introduction to 80% or higher concentrations of carbon dioxide — is aversive to the animals and stated that this "... is not acceptable and we wish to see it phased out within five years". FAWC recommends, in this context, that Government and industry should fund research into the use of non-aversive gas mixtures. Other recommendations concerning the technology of humane slaughter include that "bleeding should be carried out by severing both carotid arteries" and that "the Government code of practice should recommend that thoracic bleeding methods should be used wherever practicable".