

be banned and (c) the phasing out of battery cages should not be effected until injurious pecking and cannibalism have been eliminated or successfully controlled.

The Report is presented in seven parts: introduction, overview of the UK egg industry, systems of production, main welfare issues for various production systems, other important topics (consumer and environmental issues), and a summary of recommendations. The subjects are clearly presented and discussed and recommendations are picked out in italics at appropriate places throughout the text.

The summary of recommendations is divided into matters for early action, those for longer term implementation, and recommendations for research and development. The 21 recommendations for early action include, for example, the avoidance of feeding poultry products to reduce disease transmission risks, and specifying light intensities of at least 5 lux and preferably not less than 10 lux in cage and multi-level systems. Among the five recommendations for longer term implementation are that the Governments should pursue the improvements of harmonization of registration of veterinary medicines within the EU to increase the range of licensed poultry medicines available and that it should be compulsory for eggs to be labelled according to their system of production. Subjects identified as requiring research and development include: links between animal protein intake and injurious behaviour in hens, relationships between light intensities and wavelengths and injurious pecking behaviour, and the incidence of beak trimming in all systems in the UK.

This is a valuable document which clearly identifies and prioritizes a variety of problems and constructive approaches to their solution. It proposes important but difficult challenges for the Agriculture Ministers (such as possibly seeking an amendment to GATT/WTO arrangements) and it will be interesting to see how influential the document will be in the awaited review of EU controls on hen welfare.

Report on the Welfare of Laying Hens. Farm Animal Welfare Council (FAWC) 1997. Ministry of Agriculture, Fisheries and Food: London. 40pp. Paperback. Obtainable from FAWC, Government Buildings, Hook Rise South, Tolworth, Surbiton, Surrey KT6 7NF, UK. Free.

The welfare of animals during transport

The UK's *Welfare of Animals (Transport) Order 1997* came into force on 1 July 1997. This Order updates and supercedes the *Welfare of Animals during Transport Order 1994* and other pieces of UK animal welfare legislation relevant to animal transport, and implements Council Directive 91/628/EEC as amended by Council Directive 95/29/EEC.

The Order is, on the whole, clearly set out and written and considerably more comprehensive than the legislation it replaces. It makes provision for the welfare during transport of all vertebrates (except man) and 'cold-blooded animals' (this presumably covers a range of invertebrates). The Order primarily covers the commercial transport of animals, but certain provisions – those specifying that transport must not cause injury of suffering and that animals must be fit for travel – also apply to non-commercial transport including, for example, the transport of pet animals. It covers the following: space allowances, fitness for travel, the treatment of sick animals, feeding and watering, travelling times and rest periods, accompaniment by competent persons (required for vertebrates only) and duties of transporters. It also specifies the requirements for authorization and registration, route plans, certification and details of enforcement and offences.

The articles are accompanied by 12 schedules which provide detail on the construction and maintenance of vehicles and receptacles (transport accommodation), transport protocols regarding loading, disinfection, labelling etc, watering and feeding intervals, and regarding authorizations. There is also a schedule on 'framework of competances' which specifies the areas of knowledge required by people responsible for the welfare of animals during transport.

This Order applies to the commercial and, to a lesser extent non-commercial, transport of all animals. It is therefore very important reading for all of the wide range of persons involved in and responsible for animal transport.

The Welfare of Animals (Transport) Order 1997. Statutory Instrument 1997 No 1480. The Stationery Office Limited: London. 31pp. Obtainable from The Publications Centre, P O Box 276, London SW8 5DT, UK and other usual HMSO sources. Price £5.60.

EC report on the welfare of laying hens

This Report, which reviews current scientific evidence on the welfare of laying hens under various systems of housing, was presented to the European Council in autumn 1996 by Mr F Fischler, the Commissioner for Agriculture. It was prepared by an international panel of experts under the chairmanship of Dr H K Blokhuis of the Netherlands and was approved by the Scientific Veterinary Committee of the European Commission. It is an update of a 1992 report produced under Article 9 of Council Directive 88/166/EEC (on minimum standards for the protection of laying hens) but on which no action was taken at the time.

This is a wide-ranging and quite comprehensive Report comprising 12 chapters followed by 35 pages of references. The chapters cover definitions and measurement of welfare, housing systems, specific aspects of housing (space allowances, light, perches, drinkers etc), physical health aspects, productivity, egg quality, labour, environmental issues, economics, evaluations of different production systems, ongoing research on the welfare of laying hens, and conclusions. These chapters provide valuable reviews of the literature pertinent to the subjects and are well laid out and written.

There is a list of 22 conclusions. It is noted that these were based primarily on bird welfare considerations and that although other aspects such as production costs and environmental effects were taken into account, welfare did take precedence. Some of the conclusions are very basic but, in using the word 'must', provide firm rules, for example, that laying hens 'must have at least daily access to food and water at all times. Others are less forceful. For example: 'Light should be sufficient to allow behaviours which the birds are highly motivated to perform' (no light intensities are specified), and 'There should be selection of strains which are better adapted to other (non-battery) systems'. On the subject of battery cages, it is concluded that the battery cage as used at present has severe disadvantages for hen welfare and that 'to retain the benefits of cages and overcome most behavioural deficiencies, modified enriched cages are showing good potential in relation to both welfare and production'. Minimum space requirements are not given because of the difficulty of defining them. Looking further ahead, the final two conclusions are that high standards of hen welfare can only be sustained if the EU market is protected against imports of cheaply-produced eggs from third world countries and that further research is needed in