

Stimulus response behaviour

This is an excellent video. It is designed to be appropriate for the Science National Curriculum, Key Stage 4, and 'A' level teaching and it provides a very interesting and clear introduction to the stimulus response behaviour of farm animals (and more). The video has six sections: introduction (five steps in the stimulus response chain and how these are studied); stimuli (visual, heat, tactile, olfactory and internal); receptors; co-ordination (types of learned behaviour, habituation, classic conditioning, trial and error learning and observational learning); effectors, and responses (irritation, internal effectors and responses, stress in a non-stimulating environment, enriched environment, stereotyped behaviour, nesting and foraging behaviour), ending with a summary. This is a good, scientifically rigorous story, well-told and portrayed by a glittering cast of piglets, chickens, sheep, goats and cows. There is no moralizing; the animals 'speak' for themselves and the film will be, I suspect, quite a powerful force for animal welfare. An enjoyable piece of work which deserves very wide circulation.

Stimulus Response. The Association for the Study of Animal Behaviour (ASAB) (1996). Colour VHS video, 33 minutes. Obtainable from Michael Dockery, ASAB Education Officer, Department of Biological Sciences, John Dalton Building, Manchester Metropolitan University, Chester Street, Manchester M1 5GD, UK. Price £10 including postage and packing.

New Zealand codes for the welfare of sheep and laying hens

These Codes of Recommendations are a practical guide for those involved in animal production in New Zealand and are intended to encourage the adoption of the highest standards of animal husbandry. Written by working groups of the New Zealand Animal Welfare Advisory Committee, the Codes are based on the familiar 'five freedoms' and complement the New Zealand legislation by outlining to the informed general public the minimum welfare standards which are currently acceptable.

Code No 3 is a comprehensive revision of the first edition of the *Code of Recommendations and Minimum Standards for the Welfare of Sheep* published in 1992. It encompasses all aspects of the farm husbandry of sheep but it does not deal with the care of the animals during transportation, at markets or at the slaughterhouse. Sheep in New Zealand are kept outdoors on grassland farming systems and the information and advice largely refer to these extensive conditions. The material in the main body of the Code covers all aspects of husbandry, the minor surgical operations carried out by sheep farmers, disease control and home killing/humane slaughter. There are technical appendices on body condition scoring, on recommended positions for captive bolt stunning, on recommended livestock daily feed requirements and on recommended minimum pasture length and dry matter quantities for sheep production.

There are, of course, facets of the Code which are peculiar to the local situation, eg the Merino mulesing operation and the selection of sheep resistant to facial eczema, but the general thrust of this important and well-informed document will be of considerable interest and value to all those keeping sheep in temperate grassland areas.

Code No 18 is the latest in the same series and covers the housing, transport, feeding, health and welfare, management and humane destruction of laying hens. Again appendices provide specific data (eg a maximum stocking density equivalent to 450cm² per bird for those

older than 19 weeks). In the introduction, the committee states it is particularly concerned about the viability of closely confined layer hens to display normal behaviour and that alternative practical and economic systems should be encouraged and applied at the earliest opportunity.

This publication is clearly essential for New Zealand farmers of laying hens but, like the Code for sheep, would also be valuable for farmers in other countries which lack national guidelines.

Code of Recommendations and Minimum Standards for the Welfare of Sheep. Code of Animal Welfare No 3 (Revised). Animal Welfare Advisory Committee (1996). Ministry of Agriculture: Wellington. 40pp. Paperback. (ISBN 0 477 08550 4, ISSN 1171 090X).

Code of Recommendations and Minimum Standards for the Welfare of Layer Hens. Code of Animal Welfare No 18. Animal Welfare Advisory Committee (1996). Ministry of Agriculture: Wellington. 32pp. Paperback. (ISBN 0 478 07427 1, ISSN 1171 090X).

Both publications obtainable from the publishers, P O Box 2526, Wellington, New Zealand.

Disturbance of marine mammals by man-made noise

Over recent years there has been growing concern about the potential detrimental effects of underwater man-made noise on marine wildlife. This report, produced by the Sea Watch Foundation, is concerned with the sounds emitted by airguns used in seismic survey operations to find oil and gas deposits below the seabed. Sound source levels of airguns are generally greatest at the lower frequencies (50-140Hz) although the report also describes work which found significant levels of energy at much higher frequencies (1-20kHz) closer to the source.

What little is known about the hearing abilities and sound production of cetaceans (whales, dolphins and porpoises) is summarized in the report. The documented effects of seismic sound on the baleen and toothed whales (the two groups of cetaceans) are considered separately because of their different hearing sensitivities (low and high frequency hearing, respectively). The report brings together available information on the direct and indirect effects of this noise on cetaceans. Most of the available evidence supports the theory that baleen whales are more likely to be directly affected by seismic activities than toothed whales. However the report points out that more attention needs to be focused on the significance of seismic sound for toothed whales, including indirect potential effects caused by the displacement of prey fish species which has been well documented in relation to seismic shooting.

The report emphasizes the lack of information on the long-term significance of any noise disturbance effects on cetaceans and gives suggestions for minimizing the effects of seismic activities. This report is a useful addition to the growing literature documenting the effects of human activities on the welfare of marine mammals.

Review of the Effects of Underwater Sound Generated by Seismic Surveys on Cetaceans. Evans P G H and Nice H (1996). Sea Watch Foundation: Oxford. 50pp. Obtainable from Sea Watch Foundation, Unit 29, Southwater Industrial Estate, Station Road, Southwater, West Sussex RH13 7UD, UK. Price £5 plus £1.50 postage and packing.