

the all important issue of hibernation; activity patterns; and breeding.

The section entitled *Legal status* points out the problem that the hedgehog, as for any wild animal, is not protected by cruelty legislation; however, because they are so easily caught and rarely bite, they are extremely vulnerable to acts of cruelty.

It is surprising to learn that despite its popularity and commonality little is known about hedgehog population size and density within the UK, with estimates ranging from 0.5 million to 2.5 million. However, determining the flux of the hedgehog population from the numbers killed by gamekeepers is too difficult, as there are many factors confounding the data available, including the decrease in the number of gamekeepers 'by about 80% this century'.

In *Predators and mortality* the author notes that the hedgehog's spines present such a good defence that 'No wild predator depends on . . . hedgehogs for a significant part of its diet'. It is man and his machines that, yet again, are the cause of huge numbers of deaths. These causes include motor vehicles, mowing machines, cattle grids, chemicals, ponds, netting, a change in farming methods from grassland to arable and the destruction of hedgerows. It seems inevitable that with an increasing human population and therefore human activity – especially the increase in the number of roads and the change of farmland – that hedgehog numbers will decrease. The author certainly paints a dismal picture for this well-known figure of the countryside.

Not all is lost, however, as the booklet finishes on a conservation note, with some practical advice on how the average person can contribute to hedgehog welfare. Rescuing and caring for sick or injured hedgehogs, or abandoned young, then releasing them back into the wild can indeed be very successful. Habitat management practices around the suburbs need to be altered slightly, for example the careful use of pesticides and grass cutting machinery. There are also thoughts for the wider picture of saving more hedgehog habitat and the strategies necessary.

The Hedgehog. Pat Morris (1994). The Mammal Society: London. 24pp. Paperback. Obtainable from the publishers, 15 Cloisters Business Centre, 8 Battersea Park Road, London SW8 4BG, UK (ISBN 0 906282 46 2). Price £3 including postage.

New Zealand slaughter standards

The New Zealand Animal Welfare advisory committee regularly produces codes of recommendations and minimum standards for the welfare of animals.

In July 1994 a code of standards was issued for the welfare of animals at licensed and approved slaughter premises. This code covers the welfare of animals from the point of unloading at a slaughter plant to the time they become permanently unconscious. It applies to all animals, excluding birds, destined for meat or by-products and is intended for all those responsible for the implementation of animal welfare in the abattoir.

In the first section the physiological needs of the animals, the design and construction of facilities and the handling of animals are considered. These sections are general rather than species-specific and on the whole cover the basic requirements well. However, given the important role that lairage staff play in the humane handling of animals, this particular subject could have been covered more comprehensively. For example outlining in detail what would be considered as the 'appropriate' use of electric goads.

The second section of the code on stunning and sticking procedures is much more comprehensive and contains, as well as recommendations, explanations of why a certain approach has been chosen. The recommended shooting sites differ somewhat from UK codes and suggest aiming slightly to one side of the midline when shooting pigs, cattle and sheep from the front. In practice aiming shots to one side of the midline leaves little margin for error and might lead to less effective stunning in the abattoir situation. The code does, however, recommend minimum stun to stick intervals and the implementation of an approved quality management programme, both are good points which are missing from current UK Codes of Practice.

This is a useful document for those concerned with the welfare of animals at slaughter, it contains a number of points which could, with benefit, be incorporated into UK practice.

Codes of Recommendations and Minimum Standards for the Welfare of Animals at the Time of Slaughter at Licensed and Approved Premises. Produced and published by the Ministry of Agriculture and Fisheries: Wellington (1994). 17pp. Paperback. Obtainable from the publishers, ASB Bank House, 101–103 The Terrace, PO Box 2526, Wellington, New Zealand. Price NZ\$5.