Factors affecting the ability of sheep to rest during time in markets in Great Britain

SL Lambton*†, A Brouwer‡, TG Knowles†, G Richards†, PTE Statham†, J Walton† and CA Weeks†

† Animal Welfare and Behaviour Group, School of Veterinary Sciences, University of Bristol, Langford, North Somerset BS40 5DU, UK
‡ Animal and Plant Health Agency (APHA), Woodham Lane, New Haw, Addlestone, Surrey KT15 3NB, UK
* Contact for correspondence and requests for reprints: Sarah.Lambton@bristol.ac.uk

Abstract

In Great Britain, more than eleven million animals are transported to or from livestock markets annually. Time spent at markets is considered by Defra (Department of Environment, Food and Rural Affairs) to be ‘neutral time’, ie potentially a rest period. However, sheep in markets are subject to many potential stressors, which may prevent them resting. Lying and ruminating behaviours were analysed from 1,638 behavioural scans of sheep in 279 pens in 23 markets across Great Britain. Likelihood of observing ≥ 1 animals lying down during a scan decreased as stocking density and activity outside the pen increased. Proportion of animals observed lying in a pen (when at least one animal was lying) increased as group size and stocking rate decreased. Likelihood of observing ≥ 1 animals ruminating increased when there was no activity around the pen, and as number of sheep in the pen increased. Proportion of animals observed ruminating in a pen (when at least one animal was ruminating) increased as stocking rate, number of sheep in the pen and activity outside the pen decreased. Proportion of sheep ruminating was greater where there was no activity, compared with where there was activity outside the pen. We suggest that in order to allow higher quality rest periods for sheep in markets, then markets should be organised so that activity around the pen is minimised, eg by filling the market from back to front so that, once penned, sheep are not passed repeatedly. Stocking densities should also be low enough to allow animals to lie if they wish, while groups sizes should not be so low as to increase fear responses.

Keywords: animal welfare, auctions, behaviour, markets, sheep, transport

Introduction

Current legislation in Europe (Council Regulation [EC] No 1/2005) requires that sheep transported commercially in basic standard vehicles on journeys of more than 65 km, are not transported for longer than 8 h. Any single journey of over 8 h would require vehicles used to be of a higher standard, and statutory journey time limits and rest periods would need to be observed. Due to difficulties observing and enforcing journey time rules for livestock both entering and leaving livestock markets, the time spent in markets is currently considered by Defra (Department of Environment, Food and Rural Affairs) to be ‘neutral time’ (potentially a rest period) (Defra 2011b). In Great Britain (GB), large numbers of sheep are transported annually: 41 million sheep were moved by road in 2010, and 38 million in 2011 (Knowles et al 2013). The sheep farming industry in GB is such that animals are frequently moved from farm to market either to be sold on for fattening/overwintering on other farms, or to be sold for slaughter. Thus, large numbers of animals spend time in markets during their lives; 15% of animals moved were travelling to or from markets during 2010 and 2011, which represents more than eleven million animals (data extracted from the Animal Movement Licensing System, Scottish Animal Movements System, and Welsh animal Movement Licensing System, via the Rapid analysis and Detection of Animal-Related Risks [RADAR] system [Defra 2011a]).

In order for ‘neutral’ time in markets to be equated with a genuine period of rest, we assume that sheep must experience a period when they are able to maintain a comfortable physical state, without disturbance from stressors around them. To some extent this is provided for by the Welfare of Animals in Markets Order (1990), which stipulates, amongst other things, that for adult sheep: pens must be of a suitable size; adequate water must be provided as often as necessary to prevent thirst; sufficient feed must be provided by the owner of the animal if kept overnight (or at least every 12 h, from arrival in market); lighting must be adequate for animals to be inspected, fed and watered. However, research suggests there may be some adverse effects for journeys which include a market stop. Kim et al (1994) observed sheep, in the 2 h following arrival, in lairage at a slaughterhouse; they found that sheep from markets lay down sooner than those which came direct from farm, perhaps suggesting those sheep from markets were more in need of rest. Aside from the extra loading and