A pilot study to develop an assessment tool for sheep welfare after long journey transport

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Abstract

Sheep transport within Europe involves 9.5 million animals yearly, 63% of which travel over long journeys (> 8 h). Livestock transport, particularly over long journeys, gives rise to concern about the welfare of transported animals. The European Commission stimulates the development of market-oriented animal welfare standards for all phases of livestock production, providing an alternative to the ‘regulatory approach’. This study aimed to develop and test a new sheep welfare assessment protocol to be used following transport, irrespective of the journey purpose. The protocol included outcome (animal-based measures) and input variables (resource-based and management-based measures), being welfare-relevant aspects of both transport and unloading procedures. Weighted Cohen’s Kappa and Fleiss’ Kappa index of agreement were calculated to evaluate the raters accuracy and the inter-observer reliability. Overall, good agreement levels were found. The protocol was tested on 40 commercial transports arriving at previously selected assembly centres and slaughterhouses in Italy and Greece. The protocol was found to be feasible when applied to commercial transports, allowing for a comprehensive and quick sheep welfare assessment during unloading, without impairing stockman work. Univariate analysis was carried out to evaluate associations between outcome and input variables. In this study, significant association between outcome measures and risk factors were identified when associated to unloading procedures but not to travel conditions. In collaboration with the relevant stakeholders, this protocol might be developed into a tool for routine checks for certification purposes and could provide direct feedback to all professionals involved in animal transportation on the weaknesses and strengths of their work.

Keywords: animal welfare, long journey, sheep, transport, welfare assessment, welfare indicators

Introduction

Road transport of live animals is a large and integral part of today’s livestock industry, with the vast majority of animals being transported at least once during their production life. Across European countries, transportation distances have increased in recent decades, mainly due to the removal of customs barriers allowing animals to be sold across larger areas (Gavinelli et al. 2008). Sheep transport within Europe involves 9.5 million animals every year, 63% of which are transported for more than 8 h (Gebresenbet et al. 2010). A recent survey identified Italy as the main country of import, accounting for 50–60% of the overall sheep import, followed by Greece (7–13%), whilst the main exporters were eastern European countries (Romania, Poland and Hungary) and Spain (Gebresenbet et al. 2010). The same study highlighted two main routes for sheep travelling long journeys across the EU: from Poland, Hungary or Romania to Italy and from Spain, Hungary or Romania to Greece.

The process of transportation, including handling, loading, transporting and unloading can have a large impact on the welfare of transported animals, especially if it involves long journeys (Broom 2005; Gavinelli et al. 2008). The EC Regulation 1/2005 on the protection of animals during transport provides for special requirements for all journeys lasting more than 8 h (‘long journeys’) (European Council 2004). These requirements aim to minimise any possible negative impacts upon the welfare of transported animals (European Council 2004). Nevertheless, the concern regarding welfare issues associated with animal transport is continually increasing, eg the ‘8 h’ campaign, supported by several non-governmental organisations and by some European Parliament members, proposing an absolute limit of 8 h on all road journeys for animals transported for slaughter (European Parliament 2012). Accordingly, further research is required to develop feasible and reliable tools to ascertain at what level the welfare of animals during long journeys is ensured.