EFSA Journal

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Welfare of small ruminants during transport

Disclaimer

- This plain language summary (PLS) is a simplified communication of EFSA's *Opinion on the welfare of small ruminants during transport*.
- The purpose of this PLS is to enhance transparency and inform interested parties on EFSA's work on the topic using simplified language.
- Anyone interested in the more in-depth assessment and analysis should consult the full EFSA opinion, which can be found here.

Small ruminants – an overview

- The safety of the food chain is directly connected to the welfare of animals, particularly those farmed for food production, due to the close links between animal welfare, animal health and food-borne diseases.
- Stress factors and poor welfare can lead to increased susceptibility to transmissible diseases among animals.
- Good animal welfare practices not only reduce unnecessary suffering but also help to make animals healthier.
- In the framework of its Farm to Fork Strategy, the European Commission (EC) is undertaking a comprehensive evaluation of the animal welfare legislation, including the transport regulation (Council Regulation (EC) No 1/2005).
- This legislation on the protection of animals during transport is based on a scientific opinion adopted in 2002.
- EFSA has previously published opinions on the health and welfare of animals in 2004 (during transport and the microclimate inside animal road transport vehicles) and 2011.

What has EFSA asked the Animal Health & Welfare (AHAW) Panel to do?

- The EC requested EFSA to provide an independent view on the protection of animals during transport.
- The animals in question include cattle, sheep & goats, pigs, horses, and caged species (poultry and rabbits).

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How did EFSA carry out this work?

- The Panel followed EFSA's methodological guidance for the development of animal welfare mandates in the context of the Farm to Fork Strategy.
- Relevant peer reviewed and grey (non-peer-reviewed) literature on current practices on transport of the animal categories and species of interest was analysed, as well as animal movement statistics from the EU's TRACES database.
- Assessment was performed in terms of welfare consequences, animal-based measures (ABMs), and hazards leading to welfare consequences.
- EFSA experts' opinion was used to select and assess the most relevant welfare consequences and develop recommendations to prevent hazards and to correct or mitigate welfare consequences during transport, including quantitative thresholds for microclimatic conditions within the means of transport and for spatial thresholds (minimum space allowance).
- The development of welfare consequences over time was assessed in relation to maximum journey time.

What are the main outcomes?

- Eleven (11) welfare consequences were selected as being highly relevant for the welfare of sheep during transport.
- The occurrence of each type of welfare consequence varied depending on the stage, means, and duration of transport.
- Specific ABMs were identified for each of the highly relevant welfare consequences, including behavioural, clinical, and physiological ABMs.
- A wide variety of hazards were identified for the different welfare consequences and transport stages.
- Despite its importance, no agreed scientific definition of the concept of fitness for transport currently exists.
- Severe heat stress starts at the upper critical temperature (UCT). This was found to be 28°C for fleeced sheep and 32°C for shorn sheep.
- Increased space in the vehicle is beneficial for the animals to adjust posture in response to acceleration and other events during transport.
- The amount of time the animals are exposed to the hazards is dependent on the journey duration.
- The number and the severity of hazards that animals are exposed to during transport influence the resultant welfare consequences.
- Motion stress and sensory overstimulation start as soon as a vehicle starts moving and continues while the vehicle is moving, potentially leading to fatigue and negative affective states such as fear and distress.
- Pain and/or discomfort from health conditions or injuries might be relatively rare but for the affected animals the consequences might be severe. Moreover, they will worsen over time during transport and may lead to suffering.
- Problems associated with lack of resting become greater with increased journey duration and may lead to fatigue.
- Even when a transport vehicle is fitted with water drinkers, journeys that last more than 12 hours may result in prolonged thirst that can lead to dehydration and associated negative affective states as well as thirst-related physiological changes.
- Due to practical difficulties in feeding animals on a transport physiological changes indicative of hunger can be present after 12 hours of transport.
- Allowing sheep and goats a break on a stationary vehicle at the current commercial space allowance does not result in the intended drinking, eating, and resting behaviour and thus does not mitigate the welfare consequences of the journey.

What were the limitations of the currently available data?

- Several sources of uncertainty were identified during the assessment:
  - Transport as a complex stressor has been studied much less compared to housing or other animal welfare factors especially under European conditions.
  - Lack of documented ABMs that can be used for analysis.
  - Lack of available relevant studies under recommended conditions.

  - The time available for the literature search and analysis was restricted.
  - A limited number of experts were selected based on their knowledge of small ruminant welfare.
- The AHAW Panel considered these sources of uncertainty associated with the assessment methodology and inputs and their impact on the study's outcomes and implications.
- For each of the conclusions listed below, the AHAW Panel reported their uncertainty qualitatively.
- For a complete report on the Panel's expressed uncertainties, please consult the full opinion.

Implications and recommendations for Public Health Authorities

- To reduce the impact of transportation on animal welfare, greater space, lower temperatures, and reduced journey duration are required, compared to current rules and practices.
- The concept of fitness for transport should be properly defined, including guidelines and thresholds based on ABMs.
- Involved professionals should be well educated and trained.
- Questions on responsibility between the involved groups should be clarified.
- Research should be carried out on the development of systems to maintain the microclimatic conditions in stationary as well as moving vehicles.
- To reduce the risk of welfare consequences due to exposure to high effective temperatures, the temperature inside vehicles transporting sheep should not exceed the UCT, which is estimated to be 28°C for fleeced sheep and 32°C for shorn sheep.
- Future research should be carried out on the development of systems to maintain the microclimatic conditions in stationary as well as moving vehicles across different compartments and deck heights by e.g., air conditioning.
- Sufficient space should be allocated for animals during transport to allow them to adjust posture and balance. Minimum space allowance should be calculated using a validated scientific method (see full opinion for more information).
- The number and the severity of hazards that animals are exposed to during transport influence the resultant welfare consequences.
- Based on the evidence on continuous welfare consequences involving stress and negative affective states, the journey duration should be kept to a minimum.
- Maximum journey time should consider the stress (and sometimes fear) that the animals will experience continuously or semi-continuously.
- During transport the animals will get thirsty and hungry after 12 hours, which should be considered when selecting the maximum journey time as well.
- To end the exposure to the hazards of transport and to allow the animals to eat, drink and recover, they need to be unloaded from the transport vehicle to suitable premises.