EFSA Journal

7 September 2022

Welfare of equine during transport

Disclaimer

- This plain language summary (PLS) is a simplified communication of EFSA's *Opinion on the welfare of equine 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.

Animal welfare during transport – 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 and the EFSA Animal Health & Welfare (AHAW) Panel have previously published opinions in the topic of the welfare of animals during transport in 2002, 2004, and 2011.

What has EFSA asked the 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).

ISSN: 1831-4732

The EFSA Journal is a publication of the European Food Safety Authority, an agency of the European Union.

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 were assessed in relation to maximum journey time.

What are the main outcomes?

- An average of approximately 170,00 horses were transported between Member States per year in the period from 2019-2021, across all means of transport.
- Road transport constituted 85% of total horse transport from 2019-2021.
- Thirteen (13) negative welfare consequences were identified as being highly relevant for the welfare of horses during transport based on severity, duration, and frequency of occurrence. These included handling stress, sensory overstimulation, restriction of movement, heat stress, injuries, motion stress, and respiratory disorders.
- The occurrence of each type of welfare consequence varied depending on the stage (preparation, loading, transit, unloading and journey breaks), means (road, sea, air or train), and duration of transport.
- Horses may experience one or more negative affective states associated with these welfare consequences, including fear, pain, discomfort, fatigue, and distress.
- Specific ABMs were identified for each of the highly relevant welfare consequences, including behavioural, clinical, and physiological ABMs. These ABMs can be used to assess the condition of animals but are of limited use when animals are in a transport vehicle.
- A wide variety of hazards were identified for the different welfare consequences and transport stages.
- These were related to factors such as inexperienced or untrained handlers, lack of training of the animals, horse temperament, horse breed, use of sedatives, structural deficiencies of vehicles and facilities, poor driving skills and conditions, separation from other horses, regrouping with unfamiliar horses, unfavourable microclimatic and environmental conditions, and poor transport and husbandry practices.
- The number and the severity of hazards that animals are exposed to during transport influence the resultant welfare consequences.
- Despite its importance, no agreed scientific definition of the concept of fitness for transport currently exists.
- There are only few conditions leading animals to be unfit for transport, for which ABMs have been established and validated.
- The temperature inside vehicles during horses' transport, should not exceed the upper critical temperature (UCT), which was estimated to be 25°C dry bulb temperature.
- Horse welfare benefits from additional space with respect to the width as well as the length of a horse. Lateral space is necessary for spreading the legs to balance and adopt the excretory posture.
- Additional space with respect to the length of a horse is necessary for lowering its head for balancing, resting, and clearing of airways, with further additional space possibly required for the positioning of feeders and drinkers in vehicles.
- For unhandled horses, travelling in small groups, the limited available evidence suggests that a stocking density of no greater than 200 kg/m^2 leads to improved welfare as compared to higher stocking densities.
- The amount of time the animals are exposed to the hazards is dependent on the journey duration

- 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 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.
- Clinical respiratory disorders can be present after journeys of 10 - 14 hours.
- Gastro-enteric disorders such as gastric ulceration can be seen after 12 hours in unfed horses.
- Physiological biomarkers, indicative of prolonged hunger, have been reported after 12 hours of transport.
- Behavioural indicators of thirst have been reported after 3 hours and physiological biomarkers of dehydration after as little as 1-3 hours of transport.

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 horse 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.

Key implications and recommendations

- 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.
- To reduce the risk of welfare consequences due to exposure to high effective temperatures, the temperature inside vehicles transporting horses should not exceed the estimated UCT of 25°C.
- Future research should be carried out regarding 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.
- The width of an individual stall should be at least 40 cm wider than the width of the widest point of a horse.
- The length of an individual stall should be at least 40 cm longer that the body length of the horse (measured from the tail to the nose while the neck is parallel to the ground).
- Horses must be able to lower their head below the wither height to clear their respiratory tract, and so should not cross-tied or tied excessively short (< 60 cm rope).
- Unhandled horses should be transported in a small group composed of compatible animals free to move around with a density of < 200 kg/m^2.
- During transport, horses should be provided with feed and water ad libitum or at least at regular intervals (of no more than 4 hours) for a period of 30 minutes while the vehicle is stationary.
- Based on 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 horses will get thirsty after 3 hours if not watered and hungry after 12 hours if not fed, clinical respiratory disorders can be present after journeys of 10–14 h and gastro-enteric disorders such as gastric ulceration can be seen after 12 h in unfed horses.