EXECUTIVE SUMMARY

European Parliament

Research for ANIT Committee - Particular welfare needs in animal transport: unweaned animals and pregnant female animals

KEY FINDINGS

- Unweaned calves between 2 and 4 weeks of age experience an immunological gap due to the shift between passive and active immunity, and therefore they are more susceptible to long journeys than weaned calves.
- To meet the basic physiological and behavioural needs, unweaned calves need between 10 and 20% of Body Weight as temperate milk or milk replacer daily with 16-22 Megajoules and 160-240 g crude protein.
- On the basis of farm practices, 12 hours may be recommended as a maximum interval between milk meals.
- Confirmation of the date of insemination or mating should be obtained before the transport of pregnant female animals to ensure that the stage of gestation can be ascertained.
- Alternatively, determination of gestational age could be possible with ultrasonography. However, available data does not currently allow reliable benchmarks to be defined during late pregnancy.
- Further research is needed to establish the gestational age at which females are at particular risk of suffering poor welfare during transport.

Background

The European Implementation Assessment of October 2018 on the Regulation (EC) 1/2005 highlighted the long-distance transport of unweaned animals and the ascertaining of the state of pregnancy of live animals as two of the most important issues that remain unsolved. This study aims to analyse the welfare needs in transport of unweaned animals (with a focus on

The present document is the executive summary of the study on "Particular welfare needs in animal transport: unweaned animals and pregnant female animals". The full study, which is available in English can be downloaded at: https://bit.ly/3v06NwR

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calves) and pregnant female animals (focused on cattle, sheep, goats and sows). The study examines the available academic literature, analyses the data related to the transport of these animals and provides an overview of the main current protocols/guidelines implemented in the EU Member States and third countries. It also highlights the main issues still unsolved, describes the best animal welfare practices in the transport of unweaned animals and pregnant female animals and identifies the main conditions for their proper enforcement. Finally, the research provides policy recommendations to improve the EU animal welfare standards in this area.

Particular welfare needs in the transport of unweaned calves

The term 'unweaned animals' refers to young animals that are still on a milk diet. The focus of the study is on unweaned calves of 2-4 weeks of age, transported over long journeys (> 8h), regardless of the means of transport (road and sea transport). In the dairy industry, calves not kept for replacement are considered by-products. Often the amount and timing of colostrum feeding is not adequate for inmunity when it is provided. Furthermore, calves could be sold and placed into collection centres before long distance transportation, sometimes without receiving an appropriate quantity and/or quality of feed (milk replacer) and water during that time. At this age calves experience an immunological gap due to the shift between passive and active immunity that compromises animal health and welfare during and after transport. During the journey, unweaned calves may experience negative welfare consequences such as prolonged hunger and thirst, resting problems, thermal stress and diseases. The magnitude of the welfare consequences is likely to increase over longer journeys.

As unweaned calves are more susceptible to long journeys, the assessment of their fitness for transport is a critical point. Calves with wet or inflamed nipples respiratory disease signs, dehydration or who are in an underfed condition are not fit for transport and should not be transported.

Based on knowledge on calves kept on farms, unweaned calves need between 10 and 20 % of Body weight (BW) as temperate milk or milk replacer daily, with 16-22 MJ (3-6 weeks of age) and 160-240 g crude protein. On European farms, dairy calves in the age range of 2-5 weeks are typically fed manually twice per day with an interval of 12 hours, if they are not fed by automatic milk feeders. Even though unweaned calves are fed liquids (milk), they still need water. Long transports, where calves are not properly fed before departure or during the resting period, endanger their welfare and health, especially for unweaned calves with low body reserve and immunological weakness.

Calves have a behavioural and physiological need to ingest their milk by sucking. The position of the head during milk drinking is essential to prevent liquid from flowing into the developing rumen. Liquid feed should be provided with rubber teats placed at 50-75 cm high. After milk feeding, calves need at least 3 hours of rest for a proper digestion. Improper digestion increases the risk of diarrhoea. Electrolytes as pre-transport diet do not fulfil the calves' nutritional requirement.

On the basis of farm practice, 12 hours may be recommended as a maximum interval between milk meals, but this may vary according to transport conditions.

Therefore, during the journey calves should have enough space of adequate quality in terms of surface texture, dryness, hygiene and movement capacity (so that they can lie down, stand up and turn around without hindrance). If space allowance is reduced too much, calves cannot rest properly, resulting in fatigue. Physical space requirements increase with increasing body weight and can be calculated using the formula Area = k x $(BW)^{2/3}$, with a k between 0.027 and 0.047 for animals to reste properly and change position, if required.

At any time during the journey (stationary or moving) the temperature range has to be maintained between 5 ºC and 25 ºC. In winter/summer, the air inside the vehicles needs to be warmed/air conditioned using heaters/ACs prior to loading. During hot weather and delays, water should be provided manually and floors should be sprayed in case of heat stress. In case of engine failure a generator should keep the ventilation running.

Transport of dairy beef calves after weaning could mitigate the negative welfare consequences occurring during transport and might help to reduce post transport morbidity and mortality.

Particular welfare needs in the transport of pregnant female animals

In the EU, pregnant female animals who are 90% or more through their gestation period are considered unfit and should not be transported. Females in the last 10% of gestation are considered vulnerable, i.e. they present physiological weaknesses or pathological processes that prevent them from being transported without undue suffering. This length of the pregnancy represents 255 of 284 days in cattle, 135 of 150 days in sheep, 139 of 155 days in goats and 104 of 115 in pigs at the time of arrival at the place of destination. The major critical point on transport of pregnant female animals is the ascertaining of the state of pregnancy. A simple method to determine the length of pregnancy is through documents with the insemination or mating date. In case of natural insemination, the first day the male is put together with the female might be considered as the date of conception.

There are alternatives for pregnancy diagnosis. Some of them are invasive, expensive and/or not applicable in commercial conditions, while others are more practical, but the determination of the gestational age is not accurate. Determination of gestational age should be possible with ultrasonography. However, available data does not currently allow reliable benchmarks to be defined during late pregnancy. Further research is needed to develop an appropriate method to determine the gestational age during late pregnancy when the date of insemination or mating is unavailable.

Scientific evidence is lacking in order to determine the fitness for transport according to the stage of gestation. Further research is needed to establish the gestational age at which females are at particular risk of suffering poor welfare during transport and if their transportation should be avoided.

Further research is similarly needed to determine the appropriate space allowance, partitions, ceiling height, bedding material and maximum journey duration for transporting pregnant female animals for each livestock species.

Further information

This executive summary is available in the following languages: English, French, German, Italian and Spanish. The study, which is available in English, and the summaries can be downloaded at: https://bit.ly/3v06NwR

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