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# Transport of Calves

## Position Paper by the Federal Chamber of Veterinary Surgeons and the German Veterinary Association for Animal Welfare

**Veterinary profession/animal welfare demands**

(except transports from a holding up to 50 km away, which are undertaken by the farmer with his own means of transport)

1. **Calves are considered to be "animals with physiological weaknesses" until they have developed a stable immune system at more than four weeks of age and are therefore not fit for transport until this point in time.**
2. **The transport duration of unweaned/dependent calves after the beginning of the fifth week of age must not exceed eight hours.**
3. **Unweaned calves may only be transported from the place of departure to their final destination via one assembly centre, where they must be (able to be) fed and watered according to their needs and behaviour.**
4. **Calves may only be transported for more than eight hours if their maintenance and development needs can be satisfied via solid feed and water, i.e. at the earliest when the weaning process has been completed. Calves are not allowed to be weaned for the purpose of transport.**
5. **In this regard, changes to the legal provisions for calves must be undertaken urgently.**
6. **Pending the amendment of the legal basis, at least the following must be ensured in the transportation practice:**

   6.1. After a specific assessment of other possibilities, the transport of unweaned/dependent calves may only be carried out if it is unavoidable and if the calves are already accustomed to the intake of hay and water.

   6.2. The person responsible for transport must consistently take all measures to minimise transport-related stress factors, taking the physiological, ethological and immunological conditions of the animals into account, so that the animal welfare requirement of Sections 2 and 3(1) of the German Animal Welfare Act (TierSchG) and Article 3(a) of Council Regulation (EC) No 1/2005 is met. These include in particular:

   - Preparation for transport: After the last feed – administration of whole milk (WM) or milk replacer (MR) – a break of at least three hours for digestion/rest must be adhered to before loading begins.

- The animal welfare-friendly assistance during the loading and unloading of the calves must be carried out calmly and cautiously and the physical superiority of humans must not be exploited. Under no circumstances may calves be pulled by their ears, head, tail or legs. The animals must not be kicked or thrown.
- Constant access to drinking water and roughage during the transport must be ensured.
- The legal requirement according to Council Regulation (EC) No 1/2005, Annex I, Chapter V(1.4)(a), to feed "if necessary" after a 9-hour journey (including loading and unloading time), must **always** be complied with in the case of unweaned/dependent calves. In a vehicle licensed for this purpose, WM or MR must be offered in such a way that each individual animal of a group can simultaneously take in temperature-controlled liquid food in a physiological posture and through the act of sucking. It is to be ensured – if necessary, with appropriate supportive assistance – that a sufficient and needs-based food intake of each individual animal takes place. In addition, constant access to drinking water and roughage must also be guaranteed.

## Argumentation

### Introduction

Every transport is associated with unavoidable stress for the transported calf. Thus, it is to be ensured that any further stress is avoided. Especially with young animals, their low level of adaptability in dealing with stressful situations must by no means be overwhelmed. Therefore, before transport

- the necessity of transport must be given.
- the fitness for transport of each animal for the planned journey must be carefully assessed.
- the expected compliance with the requirements of animal welfare and the needs of the animals under the anticipated respective transport conditions must be guaranteed.

The younger the animal the higher the transport requirements, and therefore they are the highest for unweaned calves.

### Intention

This position paper from the Federal Chamber of Veterinary Surgeons (BTK) and the German Veterinary Association for Animal Welfare (TVT) is intended to present an assessment by the veterinary profession on the transport of calves and to be introduced to political bodies, professional associations and the Federation of Veterinarians of Europe (FVE) in order to

- work towards necessary legal changes and
- in the meantime, demand compliance with supplementary veterinary minimum requirements for the transport of calves.

### Definitions

Calves: domestic cattle of up to six months of age

Weaned/independent calves: The weaning of calves from milk, whole milk (WM) or milk replacer (MR) also includes weaning them from the habituation to this milk feed. The calves thus consume

the (solid) feed and water required for their maintenance and development in the necessary quantities. Their digestive systems are "adjusted" accordingly, animal-based indicators for this are the development of the forestomachs and the corresponding consistency of the faeces.

The complete weaning from WM or MR should take place as late as possible, i.e. at the earliest at 12 to 13 weeks of age (“metabolic programming” of calves for subsequent high milk and fattening performance). Until the weaning is completed, the supply and intake of WM or MR is to be classified as "feeding" and is used in the following according to this definition. The EU Commission stipulates a minimum age of two months for the end of the suckling and drinking phase.

Furthermore, there are many calves, especially – but not exclusively – from suckler cow herds that have not yet been weaned despite their older age.

**Feeding of unweaned/dependent calves**

Calves kept with their mothers suckle approximately 6-12 times a day in order to meet their need for nutrients, energy and especially protein. Calves that are habituated to automatic milk feeders show a similar frequency of feed intake. After the milk intake, the enzymatic casein precipitation takes place in the abomasum. For this physiological digestion process a break of several hours after the feed intake is required, during which the calves usually rest.

The daily intake of liquid feed is stated as being 16 to 24% of the body weight. An overfilling of the abomasum is prevented by the species-typical behaviour of taking in multiple small portions distributed throughout the day. The use of automatic feeders on farms also meets this requirement. On the other hand, a commonly practiced distribution of the daily ration over just two meals a day, can overload the abomasum's volumetric capacity, lead to digestive problems due to outflow into the forestomaches and/or the small intestine, and moreover contradicts the species-typical behaviour of calves. Intervals between meals of around 12 hours can therefore already overwhelm the adaptability of unweaned calves; intervals of more than 12 hours are in any case to be viewed as a stress associated with considerable suffering and a risk to the health of the animals.

The physiological act of sucking on the teat is carried out in two phases. The teat fills under negative pressure (about 30% vacuum phase) and is then emptied into the oral cavity under positive pressure (about 70% pressure phase). This cycle is carried out when sucking on the cow's udder or on the deformable rubber teat of the drinking bucket or machine at a frequency of around 80 to 150/min. With the "correct" posture of the head – corresponding to the natural sucking on the udder – the physiological act of sucking (not the act of swallowing) triggers the so-called "oesophageal groove reflex" in the sucking calf. In this way, the liquid feed is led directly into the stomach, namely the abomasum, bypassing the forestomaches. If the milk feed is misdirected into the still developing forestomaches, digestive disorders occur due to incorrect fermentation and putrefaction processes.

Calves can develop diarrhoea during transport, which is to be assessed as an expression of the stressful situation for the animals and does not automatically have to be attributed to incorrect feeding. Calves that show diarrhoea before the transport are to be assessed as not fit for transport due to this pathological condition. Calves with diarrhoea must be fed, regardless of the cause of the diarrhoea.

Regardless of whether they are fed milk or MR, even unweaned calves need to have access to drinking water at all times to quench their thirst. The simultaneous supply of hay of the best quality for free consumption promotes the physiological development of the rumen villi and prepares the calves for the ruminant-specific functions of the digestive tract.

**Immunology**

Calves are significantly less resilient than older cattle. At around two weeks of age, the concentration of antibodies absorbed via colostrum has already decreased considerably. However, the own immune system is not sufficiently resilient until about four weeks of age. During this time of the "immunological gap" (3-4 weeks of age) there is not sufficient immune protection in the event of contact with a wide range of pathogens (e.g. when many animals come together at an assembly centre, during transport and at the destination).

**Ethology**

The calves' field of vision causes them to perceive the environment to a large extent as a two-dimensional area. Therefore, when the environment changes, olfactory orientation is of particular importance. Noise and reflections are to be avoided as well as different ground conditions that irritate the calves.

Correct driving – based on the characteristics and needs of the animals – should preferably be carried out by "pushing" and not by pulling, not even on the rope and certainly not on extremities such as tail and ears. Sufficient time should be scheduled for loading and, especially, unloading (without taking advantage of the physical superiority of people!). The coordination of movements is not yet fully developed in calves and furthermore they do not yet walk with an aim. They are curious and need time for orientation. The herd instinct has not yet developed, and they are not yet very timid towards humans. During moving, loading or unloading the lighting must be sufficient for orientation and lead to a brighter area.

**From the legal sources (relevant for transport)**

Section 2 of the German Animal Welfare Act requires that any person keeping, caring for or required to care for an animal, must provide the animal with food, care and housing appropriate to its species, its requirements and behaviour as well as possess the knowledge and skills necessary for this. These requirements also apply to transport.

Section 3(1) of the German Animal Welfare Act prohibits "*to require an animal to produce performances clearly beyond its strength or capacity, in view of its condition, except in emergencies*".

In Council Regulation (EC) No 1/2005, Article 3, in addition to the requirement that "*no person shall transport animals or cause animals to be transported in a way likely to cause injury or undue suffering to them*", further conditions are set in points (a) to (h) to enforce this principle. The wording implies a reliable risk assessment when planning animal transports. In the further course of the regulation and especially in its annexes, the requirements are further elaborated on and specified. Transport is an energy-consuming process, especially for unweaned calves, which leads to a special need for care and feeding of the age-related particularly susceptible (vulnerable) calves.

In Annex I Chapter I(2) of Council Regulation (EC) No 1/2005, the following is postulated: "*Animals that are injured or that present physiological weaknesses or pathological processes shall not be considered fit for transport*". The enumeration of reasons for a lack of fitness for transport following in the text of the regulation is incomplete due to the use of the term "in particular" and thus allows further reasons for exclusion. According to Council Regulation (EC) No 1/2005, calves that are less than ten days old are not considered fit for transport, unless the transport distance is less than 100 km. The German Animal Welfare Regulation for Transport (TierSchTrV) in Section 10(4) regards animals as not fit for transport up to an age of 14 days.

However, the lack of fitness for transport does not end with a fixed age, as the robustness of the calves only develops steadily over a further few weeks.

Therefore, in the case of unweaned calves, it can be assumed that there is a physiological weakness with an associated low resilience and lack of sufficient physical reserves, which excludes the fitness for transport at least during the "immunological gap". For these reasons, from a professional point of view, calves may be transported after the fourth week of age at the earliest.

**Demand: Transport of calves after the fourth week of age at the earliest, as this is the earliest point in time at which they are fit for transport.**

Organisers of transports and operators of assembly centres must ensure that arriving calves have not already been unloaded at a different assembly centre. Additionally, with unweaned calves the time of the last need-covering feeding in the place of departure must be determined if they have been transported for more than 100 km. If necessary, the calves are to be fed and watered according to their needs and behaviour at the assembly centre in compliance with the provisions of the German Animal Welfare Regulation for Production Animal Husbandry (TierSchNutzV); the assembly centre must be certified for this purpose. After adequate feeding, a digestive break of at least three hours must be adhered to before the animals are loaded for transport. The veterinary profession advocates that Council Regulation (EC) No 1/2005 Article 2(r)(ii) be removed and not replaced, so that a transport to an assembly centre over more than 100 km is not permitted and a "hopping" between assembly centres is prevented. They also advocate for an alteration of the definition of the place of destination in Article 2(s) of this regulation. Thereafter, only a (final) holding, or a slaughterhouse should be given as the place of destination.

**Demand: Unweaned calves must be fed according to their needs and behaviour at the assembly centre and must be able to rest for at least three hours after the meal.**

According to Annex I, Chapter V(1.4) of Council Regulation (EC) 1/2005 "*Unweaned calves […] which are still on a milk diet […] must, after nine hours of travel, be given a rest period of at least one hour sufficient in particular for them to be given liquid and if necessary fed*". The transport can then be continued for a further nine hours. After which, a 24-hour break with care of the animals is to be carried out according to No 1.5. If a meal with milk or MR was omitted during the at least one-hour long transport break, then the time interval between two meals would extend to at least the entire duration of the transport and thus be significantly longer than the approximately twelve-hour interval whereby the daily ration is distributed over only two meals which is already associated with health risks. Feeding “if necessary” after the first transport section is therefore **always** necessary in order to meet the calves' need for food. In addition, only milk or MR is suitable for this, whereas an electrolyte solution is not. A needs-based and behaviour-based feeding of unweaned calves is not possible in the type II vehicles currently licensed for the long journeys of cattle, as they neither have the equipment required for this, nor do they carry the feed for the respective care of each individual calf with them. The legislator does not intend for the animals to be unloaded specifically for their care after the first transport section, in this case the vehicles would also have to be licensed for the long transport of unweaned animals. Furthermore, this would entail additional stress for the animals due to the unloading and repeated loading and inadmissibly extend the time period of stress and the duration of transport.

**Demand: A long transport of unweaned calves for more than eight hours is currently not permitted.**

## Legal Sources

German Animal Welfare Act (TierSchG) as published on 18 May 2006 (Federal Law Gazette I p. 1206, 1313), which was last amended by Article 280 of the Regulation of 19 June 2020 (Federal Law Gazette I p. 1328).

Council Regulation (EC) No 1/2005 of 22 December 2004 on the protection of animals during transport and related operations and amending Council Directives 64/432/EEC and 93/119/EC and Council Regulation (EC) No 1255/97 (OJ EU 2005 No. L 3 p. 1; 2006 No. L 113 p. 26).

Regulation for the protection of animals during transport and for the implementation of Council Regulation (EC) No 1/2005 (German Animal Welfare Regulation for Transport – TierSchTrV) (Federal Law Gazette I p. 375).

Regulation for the protection of farm animals and other animals kept for the production of animal products during their husbandry (German Animal Welfare Regulation for Production Animal Husbandry – TierSchNutztV), in the version dated 30 June 2017 (Federal Law Gazette I p. 2147).

## Literature


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