

## CHAPTER 7.6.

**ANIMAL WELFARE AT THE TIME OF KILLING FOR PURPOSES OTHER THAN SLAUGHTER**

Norway	<p><b>Category:</b> General</p> <p>Norway thanks WOAHA for its work in amending this chapter and for taking many of our previous comments into account. We can in general support the changes made. Yet, we do still have additional comment as indicated below.</p> <p><b>Supporting evidence:</b> not relevant</p>
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**Article 7.6.7.****Hazards to animal welfare**

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When killing animals, they may be exposed to different **hazards to animal welfare hazards** including improper **restraining restraint**, rough handling, forced movement, absence of or improper design **of premises**, inadequate construction and maintenance of premises, adverse weather conditions, unexpected loud noise and ineffective *killing* methods.

Norway	<p><b>Category:</b> Addition</p> <p><b>Proposed amended text:</b></p> <p>When killing animals, they may be exposed to different hazards to animal welfare including <u>lack of the appropriate skills by staff (leading to e.g. improper restraint, rough handling, or forced movement)</u>, absence of or improper design of premises, inadequate construction and maintenance of premises, adverse weather conditions, unexpected loud noise and ineffective killing methods.</p> <p><b>Rationale:</b></p> <p>All EFSA opinions on welfare at slaughter or killing for purposes other than slaughter identify skills of staff as an important hazard not only during restraint/handling, but also at stunning and killing. Some of the opinions are listed below:</p> <p><b>Supporting evidence:</b></p> <p>EFSA, 2024: Welfare of horses during killing for purposes other than slaughter.</p> <ul style="list-style-type: none"> <li>• EFSA 2024: Welfare of sheep and goats during killing for purposes other than slaughter.</li> <li>• EFSA, 2020: Scientific opinion concerning the killing of rabbits for purposes other than slaughter. In this opinion, the staff was identified as the origin for all 14 hazards, either due to lack of the appropriate skill sets needed to perform tasks or due to fatigue.</li> </ul>
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**Article 7.6.8.**

**Measures to assess animal welfare at the time of killing for purposes other than slaughter**

3. The following animal-based measures can be used as the confirmation of death before carcass disposal:

- a)
- b)
- c) Dilated pupils

Dilated pupils (mydriasis) are an indication of death.

<b>Norway</b>	<p><b>Category:</b> Change</p> <p><b>Proposed amended text:</b></p> <p><b>Dilated pupils (mydriasis) are an indication of death <u>but this reflex is not present in all cases</u></b></p> <p><b>Alternative</b></p> <p><b><u>Fixed and Dilated</u> pupils (mydriasis) are an indication of death</b></p> <p><b>Rationale:</b></p> <p><b>In a few cases dilated pupils will not be present, as some drugs for example anticholinergics such as atropine can prevent pupillary reactivity. The reaction in the pupils is furthermore dependent on a functioning retina. The reflex may therefore be less suitable after the start of bleeding as the blood loss can reduce the functioning of the retina.</b></p> <p><b>Several guidelines often combine dilated pupils with fixed eyes as when both these signs are present, they are an indication of brain death.</b></p> <p><b>Supporting evidence:</b></p> <p><b>Animal care and use: Chapter on Euthanasia <a href="https://research.uci.edu/animal-care-and-use/policies-and-guidance/euthanasia-of-research-animals/#:~:text=A%20constriction%20(narrowing)%20of%20the,otherwise%20affect%20this%20neurological%20response.">https://research.uci.edu/animal-care-and-use/policies-and-guidance/euthanasia-of-research-animals/#:~:text=A%20constriction%20(narrowing)%20of%20the,otherwise%20affect%20this%20neurological%20response.</a></b></p> <p><b>Claudia Terlouw, Cécile Bourguet, Véronique Deiss. Consciousness, unconsciousness and death in the context of slaughter. Part II. Evaluation methods. Meat Science, 2016, 118, pp. 147-156., p. 5 number 2.2.</b></p> <p><b>Kumar P, Clark M et al. Clinical Medicine, 2005, 6th Edition.</b></p>
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**Article 7.6.9.**

**Handling of animals**

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Electric goads should not be used routinely, but only when other measures have been ineffective, the animal has no injury or other condition and there is room for the animal to move forward.

<b>Norway</b>	<b>Category:</b> Change and Addition
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	<p><b>Proposed amended text:</b></p> <p>Electric goads should not be used routinely <u>to move animals,</u><del>but Electric goads may</del> only <u>be used</u> when other measures have been ineffective, the animal has no injury or other condition <u>that is impeding mobility</u> and there is room for the animal to move forward <u>without obstruction (e.g. obstacles or other animals).</u></p> <p><b>Rationale:</b></p> <p>To align text with chapter 7.5. article 7.5.13.</p>
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Only low-voltage goads should be applied to the hindquarters of adult pigs and large ruminants, and never to sensitive areas such as the eyes, mouth, ears, ano-genital region, udders or belly. Such instruments should not be used on equids, camelids, ratites, sheep and goats, pregnant animals or on calves or piglets. Shocks should not be used repeatedly if the animal fails to respond and should not last longer than one second.

Norway	<p><b>Category:</b> Addition</p> <p><b>Proposed amended text:</b></p> <p>Only low-voltage goads should be applied to the hindquarters of adult pigs and large ruminants, and never to sensitive areas such as the eyes, mouth, ears, ano-genital region, udders or belly. Such instruments should not be used on equids, camelids, ratites, sheep and goats, pregnant animals or on calves or piglets. Shocks should not be used repeatedly if the animal fails to respond. <u>The animal should not be subjected to more than maximum two short shocks and should each not lasting no longer than one second. At least 10 seconds should pass before prodding is repeated.</u></p> <p><b>Rationale:</b></p> <p>Even though the text is similar to that in chapter 7.5, it would be preferable to provide some guidance on how many times the goad may be used on the same animal.</p> <p><b>Supporting evidence:</b></p> <p>Norwegian Scientific Committee for Food and Environment, VKM Report 2017:31 A review on the use of electric devices to modify animal behaviour and the impact on animal welfare.</p> <p><u><a href="#">A review on the use of electric devices to modify animal behaviour</a></u></p>
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Article 7.6.17.

## Cervical dislocation

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1. Animal welfare concerns
2. Animal-based and other measures

Animal-based measures of an effective application of cervical dislocation are signs of death.

<b>Norway</b>	<b>Category:</b> Change and Addition <b>Proposed amended text:</b> <b>Animal-based measures of an effective application of cervical dislocation are signs of death, <a href="#">cf. this chapter's article 7.6.8. number 3.</a></b> <b>Rationale:</b> <b>To ease use of the chapter.</b>
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Article 7.6.19.

## Electrical — two-stage application

### 3 [Recommendations](#)

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Ineffective application of the first stage of the method should be followed by a backup method or the repetition of the first stage.

<b>Norway</b>	<b>Category:</b> Addition <b>Proposed new text:</b> <b><a href="#">Constant current stunners ensure that the minimum current is provided to the animal independently from individual impedance and should always be preferred to constant voltage stunners.</a></b> <b>Rationale:</b> <b>To be consistent with article 7.6.21., as this sentence applies to all electrical methods. The same alteration should be made in articles 7.6.20. and 7.6.22.</b>
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Article 7.6.22.

## Water bath killing

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### 2 [Animal-based and other measures](#)

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Animal-based measures of an effective electrocution are: absence of muscle tone; apnoea; and absence of corneal or palpebral reflex; absence of vocalisation and absence of righting reflex.

<b>Norway</b>	<b>Category:</b> Deletion <b>Proposed deletion:</b> <b>Animal-based measures of an effective electrocution are: absence of muscle tone; apnoea; and absence of corneal or palpebral reflex; <del>absence of vocalisation and absence of righting reflex.</del></b> <b>Rationale:</b>
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	<p>Animals that are merely immobilized but fully conscious are not able to move, and they will not show a righting reflex or be able to vocalise. As this measure is unreliable it should not be included in the animal-based measures.</p> <p>Supporting evidence:</p> <p>EFSA opinions</p> <p>Killing for purposes other than slaughter: poultry, p. 54: <i>“Despite some exceptions, such as electro-immobilisation or other provoked paralysis, an animal can be presumed to be unconscious when it loses its natural standing position, is not awake and does not show signs of positive or negative emotions such as fear or excitement.”</i></p>
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Article 7.6.24.

#### ~~Addition of anaesthetics to feed or water~~

Norway	<p><b>Category:</b> Deletion</p> <p><b>Proposed deletion:</b></p> <p>The article should be <b>deleted</b>.</p> <p><b>Rationale:</b></p> <p>Sick animals tend to eat and drink less. Consequently, not all animals, particularly those that are sick, will ingest a lethal dose and therefore this method will not be 100% effective.</p> <p><b>Supporting evidence:</b></p> <p>There are concerns that poor palatability may potentially reduce voluntary consumption of the agent by poultry (Raj, 2008). The bitter taste of many drugs prevents the intake of a single lethal dose and attempts to encourage animals to ingest the drug in sufficient quantity would require withdrawal of food and water for considerable periods prior to the cull, generating welfare concerns (McKeegan, 2018).</p>
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~~An anaesthetic agent which can be mixed with poultry feed or water may be used to kill poultry in houses. Commonly used general anaesthetic agents are not intended or approved for oral use. . Poultry which are only anaesthetised need to be killed by another method such as cervical dislocation.~~

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Article 7.6.29.

#### ~~Water-based foam~~

Norway	<p><b>Category:</b> Deletion</p> <p><b>Proposed deleted text:</b></p> <p>The article should be <b>deleted</b>.</p> <p><b>Rationale:</b></p>
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	<p>See also comment to article 7.6.30 on water content in foam. According to EFSA suffocation is highly painful and should not be used on welfare grounds.</p> <p>Therefore, it is not appropriate to include such a method in a chapter named animal welfare at the time of killing.</p> <p>There are several mass killing methods which exist and could still be used in different circumstances due to their speed and efficiency, but they should not be recommended in this chapter as they can't ensure even basic animal welfare.</p>
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#### Article 7.6.30.

#### Gas infused high expansion foam

A way to introduce a high gas concentration or to create a situation with very low O<sub>2</sub> in containers or in buildings that are difficult to fill with gas is by using a high expansion foam filled with the gas. The most suitable gas is Nitrogen. The principle of the method is that animals are exposed to an environment of > 99% of N<sub>2</sub> (or other gas) and die due to anoxia. The high gas concentration is achieved due to the foam being produced using a gas from a pure source instead of with air.

Norway	<p><b>Category:</b> Addition</p> <p><b>Proposed new text:</b></p> <p><u><a href="#">High expansion foam should have a very low water content, to avoid airways being blocked and suffocation occurring. The water content can be assessed from the size of the bubbles.</a></u></p> <p><b>Rationale:</b></p> <p>Foam with an expansion ratio between 250:1 and 350:1 appeared to be the optimum compromise between foam stability, water content, bubble size and wetness. It is recommended that high expansion foam should have a very low water content so as to prevent water entering the respiratory tract and drowning the animals. Furthermore, so that the airways are not blocked, and suffocation does not occur. The water content can be assessed from the size of the bubbles. In this regard, a bubble size of 10 mm has been suggested for poultry and the same may apply also to pigs.</p> <p><b>Supporting evidence:</b></p> <p>EFSA opinion on “Welfare of pigs during killing for purposes other than slaughter” <a href="https://doi.org/10.2903/j.efsa.2020.6195">https://doi.org/10.2903/j.efsa.2020.6195</a></p> <p>EFSA opinion on “Killing for purposes other than slaughter: poultry” <a href="https://doi.org/10.2903/j.efsa.2019.5850">https://doi.org/10.2903/j.efsa.2019.5850</a></p> <p>EFSA opinion on “The use of high expansion foam for stunning and killing pigs and poultry” <a href="https://doi.org/10.2903/j.efsa.2024.8855">https://doi.org/10.2903/j.efsa.2024.8855</a></p>
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**Ventilation shut down with supplementation**

<b>Norway</b>	<p><b>Category:</b> Deletion</p> <p><b>Proposed deleted text:</b></p> <p>The whole article should be <b>deleted</b>.</p> <p><b>Rationale:</b></p> <p>This is not a method merely something humans resort to when they do not have a method available to humanely kill the birds. It is inhumane and has no place in a chapter with animal welfare recommendations.</p> <p><b>Supporting evidence:</b></p> <p>According to EFSA ventilation shut down with or without additional provision of heat or CO<sub>2</sub> is likely to be highly painful and should not be used on welfare grounds.</p>
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~~Ventilation shut down with supplementation such as active heating should not be routinely used and should be regarded as a method of last resort for poultry.~~

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