

Confirmation of death

Pain, Fear, Distress



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How to determine death after euthanasia?

- After pigs are euthanized, there is still the risk that pigs are not dead due to ineffective or improper application of the killing method.
- The lack of monitoring and confirmation of death can lead to the disposal of live animals which may lead to fear, pain and distress of the pigs. Therefore, death of each pig must be confirmed before disposal of the carcass.
- Dead piglets show absence of muscle tone leading to a relaxed body, absence of breathing (apnoea), absence of heartbeat and responses to corneal and palpebral stimuli and dilated pupils.



"In the case of emergency killing, the keeper of the animals concerned shall take all the necessary measures to kill the animal as soon as possible." {Article 19}



Note: Listed requirements are not comprehensive. Moreover, there might be stricter national legislation in place.

Legal requirements



Council Regulation (EC) No 1099/2009

defines the term 'emergency killing' as the "[...] *killing of animals which are injured or have a disease associated with severe pain or suffering and where there is no other practical possibility to alleviate this pain or suffering [...]*" {Article 2, lit. d)};

states "*It is an ethical duty to kill productive animals which are in severe pain where there is no economically viable way to alleviate such pain.*" {Recital 12};

and requests as general requirement for the killing and related operations that "*animals shall be spared any avoidable pain, distress or suffering during their killing and related operations.*" {Article 3, Paragraph 1};

To ensure this, in accordance with Article 3 Paragraph 2, all necessary measures are taken in the handling and housing of the animals (e.g. clean housing under appropriate temperature conditions, protection from injury).

Inspection method (recommended)









- If the inspector is present when an animal is euthanized by the farmer, he/she shall supervise the execution of the killing of the animal and the mandatory confirmation of death by the farmer.
- The inspector shall provide guidance to the farmer, where necessary, to optimize the application of the killing method and assist in the mandatory determination of death prior to carcass disposal.
- In case of ineffective application the inspector shall instruct the farmer to immediately apply appropriate measures, if this is not done independently.
- If the inspector does not have the opportunity to be present when the farmer euthanizes an animal, he/she may conduct a post-mortem inspection of the animals. The post mortem inspection may reveal method application failures as well as a delayed killing of the animal following a prolonged period of pain and suffering before death.

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Indicators

Farmers must affirm death of each animal killed previously on farm by confirming the absence of vital signs of cardiovascular, respiratory and neuronal functioning.

Assess each pig immediately after the end of the killing process and before disposal of the carcass for each subsequent indicators: body movements, breathing, corneal, palpebral and pain reflexes, heartbeat and pupil size. If there is one of the indicators visible, death cannot be confirmed and corrective measures must be taken.

	How to check the indicator 		
Body movements Absence of muscle tone, a complete relaxed body	Check the jaw tone (lower jaw) with your hands.		Body movements Presence of muscle tone, no complete relaxed body
Breathing Absence of breathing, apnoea	Check the body visually for movements of chest and/or abdomen, or e.g. auscultate the lungs using a stethoscope for breathing sounds or hold a mirror close to the nostrils and check for condensation.		Breathing Presence of breathing
Corneal and palpebral reflex Absence of response to palpebral and corneal stimuli	Touch the lateral corner of the eye (palpebral reflex) or the cornea (corneal reflex) with your finger or better with the tips of a pantograph plier.		Corneal and palpebral reflex Response to palpebral and corneal stimuli
Heartbeat Absence of heartbeat and/or pulse	Auscultate the heart from the left side of the body (e.g. with a stethoscope) and/or palpate the pulse (e.g. A. femoralis or A. auricularis) as possible		Heartbeat Presence of heartbeat and/or pulse
Pupil size Dilated pupils (mydriasis) as the onset of brain death	Spread the eyelids of one eye of the piglet with the fingers and check the size of the pupil.		Pupil size Contracted pupils (miosis)

Source of indicators: EFSA AHAW Panel, 2013, 2020



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