

Arrival and lairage management



Biology and needs of pigs

By understanding behavioural and physiological needs of pigs, inspectors and business operators can differentiate between 'normal coping behaviour' of pigs in slaughterhouses, or behaviour that indicates prevalence of animal welfare issues:

- Pigs have a pronounced exploratory behaviour; they predominantly use their smell to investigate their surroundings, by sniffing and stopping.
- The pig's eyesight is poor; optical irregularities, such as shadows, rays of light or other optical distractions, can have a significant effect on pigs' willingness to move forward.
- Walking is the type of locomotion shown by relaxed animals. They generally prefer to move in small groups (5-7 pigs) beside and behind each other.
- Pigs thermoregulate via social, muscular and behavioural adaptation. Pigs are particularly sensitive to high ambient temperatures due to a very limited number of sweat glands.
- Pigs are social animals that live in groups in which members know each other individually. Within a group, stable social relationships regulate access to resources, such as food and lying areas.
- Water requirements and the frequency of pigs drinking depend very much on climatic conditions, diet, environmental stressors, frequency of water provision and the physiological state of pigs.

Legal requirements



General requirements for killing and related operations as specified in Council Regulation (EC) No **1099/2009**:
"1. Animals shall be spared any avoidable pain, distress or suffering during their killing and related operations.
2. (...), business operators shall, in particular, take the necessary measures to ensure that animals:

(a) are provided with physical comfort and protection, in particular by being kept clean in adequate thermal conditions and prevented from falling or slipping; (b) are protected from injury; (c) are handled and housed taking into consideration their normal behaviour; (d) do not show signs of avoidable pain or fear or exhibit abnormal behaviour; (e) do not suffer from prolonged withdrawal of feed or water; (f) are prevented from avoidable interaction with other animals that could harm their welfare. (...)." {Chapter II, Article 3}

Welfare of pigs pre-slaughter

Based on the pigs' biology and needs, three focus areas regarding welfare of pigs at slaughterhouses can be identified:

Three focus areas during inspections

- ✓ Arrivals at the slaughterhouse
- ✓ Handling and moving in lairage
- ✓ Lairage and comfort around resting



Three focus areas for inspections

Relevance for pig welfare in conjunction with welfare indicators



ARRIVALS AT THE SLAUGHTERHOUSE

- Before unloading pigs from trucks at the slaughterhouse, their health status must be assessed.
- Thermal (heat or cold) stress indicates that pigs are outside their thermo-neutral zone (15-21 °C) upon arrival. Pigs are particularly sensitive to high ambient temperatures, due to a very limited number of sweat glands.
- Strict management for trucks upon arrival in respect to the schedule and the number of pigs being delivered can shorten waiting times of pigs on vehicles.
- Isolation pens for animals that show fatigue shall be prepared and available for immediate use before any animals arrive.
- Animals that are unable to walk off vehicles must under no circumstances be dragged to the place of slaughter, but be emergency killed where they are lying.

- e Huddling, shivering and panting
- e Fatigued and dead pigs
- e Lameness
- e High pitch vocalization
- e Slipping and falling



HANDLING AND MOVING PIGS IN LAIRAGE

- Pigs should be moved applying as little pressure as possible. Handlers need to be trained accordingly and hold a certificate of competence.
- The layout and construction of lairage should encourage pigs to move freely within lairage passageways and races to the stunning area.



- The size of groups being moved, ramps for unloading, the layout of lairage, lighting management, surfaces of floors, the level of noise and airflows and handling of animals are significant for pigs' ease of movement.

e Skin lesions

e Turning back and reluctance to move

LAIRAGE AND COMFORT AROUND RESTING



Lairage can have a positive effect on a pig's physical and mental state before slaughter, provided that:

- Familiar pigs in groups are maintained, as pigs are social animals that live in groups in which members know each other individually.
- Pigs have enough space to lie in half lateral recumbency, preferably full recumbency with higher temperatures.
- Pigs have access to water in sufficient quantity and of good quality.
- Animals which have not been slaughtered within 12 hours of their arrival should be fed.

e Access to water and food

e Space allowance

Welfare indicators for inspections

To identify welfare issues related to arrival and lairage management



FOCUS AREA	INDICATOR	SHORT DESCRIPTION	INDICATOR FACTSHEET
Arrivals at the slaughter-house 	Huddling, shivering and panting <i>Also 'Lairage and comfort around resting'</i>	Huddling (lying on top of pig(s)) and shivering (vibration of body) are a sign of cold stress; panting (high-frequency, open-mouth breathing) indicates heat stress.	https://edepot.wur.nl/533105
	Fatigued and dead pigs <i>Also 'Lairage and comfort around resting'</i> 	Fatigue is a sign of acute stress that results from exhaustion, and animals are unable to get up or move. Pigs may also be dead on arrival or die after unloading.	https://edepot.wur.nl/533106
	Lameness <i>Also 'Handling and moving pigs in lairage'</i> 	When being lame, a pig is unable to use one or more limbs in a normal manner.	https://edepot.wur.nl/533108
	High pitch vocalisation <i>Also 'Handling and moving pigs in lairage', 'Lairage and comfort around resting'</i>  	The rate of squeal-grunts/high pitch screams increases with increased fear, pain or distress.	https://edepot.wur.nl/538743
	Slipping and falling	Slipping and falling are indicators for slippery floors, rough handling or steep ramps.	https://edepot.wur.nl/538747
Handling and moving pigs in lairage 	Skin lesions <i>Also 'Lairage and comfort around resting'</i> 	Lesions include broken skin, fresh (i.e. bleeding) wounds and healing lesions. Skin lesions can result from fighting in pens or pre-slaughter handling.	https://edepot.wur.nl/533107
	Turning back and reluctance to move	Turning back and walk to or onto the truck, and reluctance to move forwards are indicators of fear and distress.	https://edepot.wur.nl/538745
Lairage and comfort around resting 	Access to water and food	All pigs in lairage pens should have access to water in sufficient quantity and of good quality. After a maximum of 12 hours in lairage pen pigs must have access to food.	https://edepot.wur.nl/533104
	Space allowance	The combination of insufficient space to lie down and high ambient temperatures is a risk factor for hyperthermia and can lead to circulatory problems and death.	https://edepot.wur.nl/538749

All indicator factsheets "Arrival and lairage management": <https://edepot.wur.nl/533109>

Legal requirements

Related to procedures and competence, and the three focus areas for inspections 

<p>Procedures, responsibilities and competence</p>	<p>Council Regulation (EC) No 1099/2009</p> <ul style="list-style-type: none">  <i>Standard Operating Procedures</i>: "1. Business operators shall plan in advance the killing of animals and related operations (...)." { Chapter II, Article 6}  <i>Level and certificate of competence</i>: "1. Killing and related operations shall only be carried out by persons with the appropriate level of competence to do so (...)." { Chapter II, Article 7}  <i>Layout, construction and equipment of slaughterhouses</i>: "1. Business operators shall ensure that the layout (...) comply with the rules set out in Annex II. (...)." { Chapter III, Article 14}  <i>Handling and restraining operations at slaughterhouses</i>: "1. Business operators shall ensure that the operational rules for slaughterhouses (...) are complied with. (...)." { Chapter III, Article 15}  <i>Animal welfare officer</i>: "1. Business operators shall designate an animal welfare officer for each slaughterhouse to assist them in ensuring compliance with the rules (...)." {Chapter III, Art. 17}  <i>Emergency killing</i>: "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." {Chapter IV, Article 19}
<p>Arrivals at the slaughterhouse</p> 	<p>Council Regulation (EC) No 1099/2009</p> <p><i>Operational rules for slaughterhouses</i>: "1. The arrival, moving and handling of animals:</p> <ul style="list-style-type: none">  1.1. The welfare conditions of each consignment of animals shall be systematically assessed by the animal welfare officer (...)  1.2. Animals shall be unloaded as quickly as possible after arrival and subsequently slaughtered without undue delay." {Annex III} <p>Council Regulation (EC) No 1/2005</p> <ul style="list-style-type: none">  <i>Space allowances</i>: "All pigs must at least be able to lie down and stand up in their natural position. (...)." {Annex I, Chapter VII, D. Pigs}  <i>Facilities and procedures</i>: "1.3. Facilities for loading and unloading, including the flooring, shall be designed, (...) so as to: (a) prevent injury and suffering (...)."; {Annex I, Chapter III}
<p>Handling and moving</p> 	<p>Council Regulation (EC) No 1099/2009</p> <p><i>Layout, construction and equipment of slaughterhouses</i> {Annex II}. "2. Lairage facilities for animals not delivered in containers":</p> <ul style="list-style-type: none">  "2.1. Pens, passageways and races shall be designed and constructed to allow: (a) the animals to move freely (...); (b) pigs or sheep to walk side by side, (...)." <ul style="list-style-type: none">  "2.2. Ramps and bridges shall be equipped with lateral protection to ensure that animals cannot fall off."  "2.5. Floors shall be built and maintained in such a way as to minimise the risk of animals slipping, falling or injuring their feet."
<p>Comfort around resting</p> 	<p>Council Regulation (EC) No 1099/2009</p> <p><i>Layout, construction and equipment of slaughterhouses</i> {Annex II}. "1. All lairage facilities":</p> <ul style="list-style-type: none">  "1.1. Ventilation systems (...) so that the welfare of the animals is constantly ensured, (...)." <ul style="list-style-type: none">  "1.3. Lairage facilities (...) so as to minimise the risk of injuries to the animals (...)." <ul style="list-style-type: none">  "2. Lairage facilities for animals not delivered in containers": <ul style="list-style-type: none">  "2.3. The water supply system (...) to allow all animals at all times access to clean water (...)."



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For any questions or suggestions regarding this factsheet please contact info.pigs@eurcaw.eu