

12th meeting of the EU Platform for AW
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EFSA Scientific Opinion on the welfare of pigs on farm

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EFSA was requested to give an independent view on the welfare of pigs on farm as a part of the revision of the EU AW legislation (by 2023)

- **Six pig categories:** gilts&dry sows, farrowing&lactating sows, suckling piglets, weaners, rearing pigs, boars
- **Five General ToRs:** 21 husbandry systems
- **Five Specific ToRs:** 10 exposure variables, 3 mutilations, indicators (ABMs) to collect at slaughter to assess on-farm welfare
- Data from literature, WG experts' opinion, MSs (AHAW Network) and Stakeholders (PC)
- Qualitative and quantitative methodologies (EKEs)
- **Outcomes: 105 Conclusions** (with uncertainty analysis) & **71 Recommendations**
- **Timeline:** June 2020 → June 2022 → August 2022 





General Terms of References

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For **each pig category**:

1. Describe the current **husbandry systems and practices**
2. Describe the **relevant welfare consequences**
(based on expert opinion regarding the severity, duration and occurrence)
3. Define **Animal-Based Measures** (ABMs) to assess the welfare consequences
4. Identify the **hazards** leading to these welfare consequences
5. Provide **recommendations to prevent, mitigate or correct** the welfare consequences

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Literature searches	Experts opinion	Public consultation
Reviews	WG discussion Specific exercises*	27 July - 13 Oct. 2021

* Selection of the highly relevant welfare consequences and Development of outcome tables

General ToRs: 16 highly relevant welfare consequences (Concl.)

Welfare consequences	PIG HUSBANDRY SYSTEMS																
	Gilts + dry sows			Farrowing and lactating sows			Piglets				Weaners			Rearing pigs			Boars
	Individual stalls	Indoor group	Outdoor paddock	Individual crates	Individual pens	Outdoor paddock	Individual crates	Individual pens	Artificial rearing systems	Outdoor paddock	Indoor group housing	Indoor with access to outdoor	Outdoor paddock	Indoor group	Indoor with access to outdoor	Outdoor paddock	Indoor individual pens
Restriction of movement	x	o		x	o	v	o	o	x		o	v		x	o	v	x
Resting problems	x	o	v	x	o	o	o	o	o	o	o	o		x	o	o	o
Group stress	x	x	x	x	o	o	x	x	x	x	x	x		x	x	o	
Sensorial under and/or overstimulation	o	v	v	v	v	v	o	o	o	v	o	v	v	o	o	v	v
Handling stress	o	o	o	o	o	o	o	o	o	o	o	o	o	v	v	v	o
Isolation stress	o			o	v	v											x
Separation stress	o	v	v	v	v	v	o	o	x	o	o	o					o
Inability to perform comfort behaviour	o	o	v	v	o	v	v	o	v	v	v	v	v	o	o	v	o
Inability to perform sexual behaviour	o	v	v			v								v	v	v	o
Inability to avoid unwanted sexual behaviour		o	o			v							o	o	o		
Inability to perform exploratory or foraging behaviour	x	x	v	x	o	v	x	o	x		x	x	v	x	x	v	x
Inability to express maternal behaviour				x	o	v											
Inability to perform sucking behaviour							o	o	x	o	o	o	o				
Inability to perform play behaviour	v	v	v	v	v	v	o	o	o	v	v	v	v	o	v	v	v
Predation stress						o			v	o			v				
Prolonged hunger	x	x	x	o	o	o	x	x	x	x	o	o	o	v	v	o	x
Prolonged thirst	o	o	o	o	o	o	x	x	o	x	o	o	o	o	o	o	v
Heat stress	o	o	o	x	o	o	v	v	v	o	o	v	o	o	o	o	o
Cold stress	o	v	o	v	v	o	o	o	v	x	o	o	x	v	v	o	o
Locomotor disorders (including lameness)	o	x	o	o	o	o	o	o	v	o	o	o	o	x	x	o	x
Soft tissue lesions and integument damage	o	x	o	x	o	o	x	x	o	x	x	x	o	x	x	o	o
Bone lesions (incl. fractures and dislocations)	v	o	v	v	v	v	o	o	v	o	v	v	v	v	v	v	v
Skin disorders (other than soft tissue lesions and wounds integument damages)	v	v	o	v	v	o	o	o	v		v	o	o	v	o	o	v
Respiratory disorders	v	v	v	v	v	v	o	o	o	v	o	o	o	x	x	o	o
Eye disorders	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
Gastro-enteric disorders	v	v	v	v	v	o	o	o	o	o	x	x	x	o	o	o	v
Reproductive disorders	o	v	v	o	o	o											v
Mastitis				o	o	o											
Metabolic disorders	v	v	v			v	o	o	o	v	v	v	v	v	v	v	v
Umbilical disorders and hernias							o	o	v	o	v	v	v	o	o	o	

General ToRs: one outcome table for each pig category (C&Rs)

Welfare of gilts and dry sows: outcome table linking the highly relevant welfare consequences, ABMs, hazards, and preventive, corrective and mitigation measures in the three husbandry systems that have been fully assessed in the General ToRs (individual stalls, indoor group housing, outdoor paddock systems). Cross-reference to the sections describing the welfare consequences and related ABMs, and husbandry systems is provided.

Welfare consequence	Husbandry system(s) for which the welfare consequence is highly relevant	Hazard(s) with indication to which husbandry system(s) it applies to	Preventive measure(s) for the hazard*	Measure(s) correcting the hazard or mitigating the welfare consequence	ABM(s)**
Restriction of movement (overall description: Section 3.4.1; details in Section 4.1.1)	Individual stalls (Section 3.3.2.2)	– Insufficient space	– Change to a group housing system	None	(Table 12 -Section 3.4.1) –Locomotory behaviour –Lying behaviour –Posture changes – <i>Atypical lying down movements (mainly in sows)</i> – <i>Pressure injuries (shoulder ulcers, calluses and bursitis)</i> – <i>Dewclaw injuries</i>
		– Poor floor quality	– Select and maintain appropriate flooring	– Provide adequate substrates or rubber mats on the floor	
Prolonged hunger (overall description: Section 3.4.9; details in Section 4.1.5)	All three systems: – Individual stalls (Section 3.3.2.2) – Indoor group housing (Section 3.3.2.3) – Outdoor paddock systems (Section 3.3.2.5)	– Insufficient nutrients supplied (relevant to all three systems)	– Calculate and supply nutrient needs*		(Table 24 -Section 3.4.9) – Stereotypic behaviours – <i>Body condition</i>
		– Unsatisfying diet form and inability to functionally express foraging motivation (relevant to all three systems)	– Increase dietary bulk and prolong feeding time* – Provide fibrous diet, <i>ad libitum</i> feeding of low-density diet* – Provide foraging material* (mainly indoor systems)		

* Preventive measures that may also be used to correct an ongoing problem.

** The ABMs considered neither sensitive nor specific are presented in 'Italics' but for information purposes only and are not recommended to be used in practice.



Specific Terms of References

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Propose detailed ABMs and preventive and corrective measures with, where possible, **either qualitative** (yes/no) **or quantitative** (minimum/maximum) criteria

1. Gilts and dry pregnant sows during **the first 4 weeks of pregnancy**
2. Gilts and dry pregnant sows **one week before farrowing**
3. Sows and piglets from **farrowing to weaning**
4. **Weaners and rearing pigs**, in particular with the risks associated with a) weaning, b) space allowance c) types of flooring, d) enrichment material, e) air quality, f) health status, g) diet and h) practice of mutilations (tail docking, tooth clipping, castration)
5. The assessment of **ABMs collected in slaughterhouses** to monitor the level of welfare on pig farms (e.g. tail damages, stomach ulcers, lung lesions)



Five Specific ToRs: exposure variables

Propose detailed ABMs and preventive and corrective measures with, where possible, either qualitative (yes/no) or quantitative (minimum/maximum) criteria

Specific ToRs	Exposure variables
1. Gilts and dry pregnant sows during the first 4 weeks of pregnancy	Grouping time
2. Gilts and dry pregnant sows one week before farrowing	Space allowance
	Nest-building material
	The period the sow is confined in a crate (relative to farrowing)
3. Sows and piglets from farrowing to weaning	Space allowance
	Enrichment material
	The period the sow is confined in a crate
4. Weaners and rearing pigs	Weaning age
	Space allowance
	Types of flooring
	Enrichment material
	Air quality
	Health status
	Diet composition
	Practices of mutilation: tail docking, tooth reduction , castration
5. ABMs collected in slaughterhouses to monitor the level of welfare on pig farms: cull sows and rearing pigs	



Grouping ('mixing') gilts and dry sows (some C&Rs)

The welfare consequences associated with grouping gilts and sows **can be mitigated at any stage by adhering** to the **principles of good mixing**, good home pen design/layout and good feeding and general management.

Grouping gilts and dry sows in the period **between 8 and 21 days post-service**, will cause **detrimental effects** to farrowing rate indicative of stress; the farrowing rate of sows **grouped at weaning is comparable to that of sows housed in stalls** for the duration of pregnancy.

To avoid the welfare consequences of stall housing and the possible consequences of stress during early pregnancy for reproductive performance, it is recommended to group sows at the time of weaning

Farrowing systems, space requirements and adaptation period (some C&Rs)

For animal welfare reasons, periparturient and lactating sows should not be housed in farrowing crates but in farrowing pens.

Farrowing pens that provide at least **6.6 m² available space to the sow** can achieve the same **piglet mortality** as in a permanent crate. This roughly equates to a total pen space of at least **7.8 m²**. Above 6.6 m², the behavioural freedom of sows and piglets increases, but piglet mortality does not further decrease.

The use of a **temporary farrowing crate** system **cannot be advised as a step in a farm's transition from using farrowing crates to farrowing pens**, unless the size of the temporary farrowing crate system is the same as that of the future free farrowing pen.

When converting from a system with farrowing crates to a system with farrowing pens, an **adaptation period** for individual sows, the herd as a whole and the stockperson will be needed before piglet survival levels will be similar or better than before the conversion. A minimum of period of **6 months** is needed for this adaptation.

Tail docking should not be performed.

Tail biting should be prevented by applying preventive measures that are farm-specific after a risk assessment analysis for which tools currently exist.

*In the cases where tail docking is allowed, the procedure should be done **as early as possible**, a **cautery method** should be used, practical and effective methods of **pain relief during and after** it is performed, should be developed, **adequate hygiene measures** during the whole procedure to prevent the risk of infection*

Docking the tail close to the first coccygeal vertebrae has a larger impact on soft tissue, bone and nervous tissues than leaving a longer length of tail

Cutting only the tip of the tail is less effective in preventing biting lesions

All pigs should be provided with effective enrichment to reduce the risk of tail biting

Straw, hay, silage or other loose organic substrates are more effective in reducing tail biting than enrichment materials which are suspended from a ceiling or fixed to a wall.

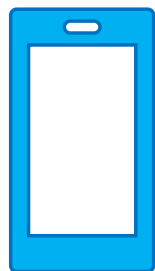
Loose organic substrates are more effective in reduce tail biting than **pressed straw blocks and dispensers** that require extensive manipulation to obtain the substrate.

Objects on the floor or fixed on the wall, jute bags and fresh wood can be effective in reducing tail biting whereas other objects (e.g. rubber toys) are not as effective, unless replaced regularly to maintain novelty.

Competition caused by limited amount and availability of enrichment materials reduces the effectiveness of the enrichment to reduce tail biting.

A reduction in tail biting can be achieved in undocked pigs if they are offered **20 g per day of straw or similar substrate**. However, quantities that are larger (e.g. up to 400 g/pig per day) are more effective.

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