

Public consultation on the draft Scientific Opinion on welfare of pigs on farm

European Food Safety Authority (EFSA)

Abstract

The European Food Safety Authority (EFSA) launched a public consultation to receive input from the scientific community and all interested parties on some sections of the draft Scientific Opinion (SO) on the Welfare of Pigs on farm. The document submitted to Public Consultation addressed a first set of the General Terms of References (ToRs) and contained sections that describe the pig categories, pig husbandry systems, the welfare consequences that are considered as the highly relevant for pigs, and the related animal-based measures (ABMs) relevant to assess pig welfare. A number of husbandry systems were also identified as the most relevant for a full assessment. In addition, the document presented a list of exposure variables that were proposed as the most relevant for further assessment in the Specific ToRs. The written public consultation for this document was open from 27 July 2021 to 13 October 2021. EFSA received comments from 15 interested parties. EFSA and its AHAW Panel wish to thank all the interested parties, including anonymous contributors, from nine different countries. All the comments are published in the EFSA web page as received (<https://open.efsa.europa.eu/consultation/a0c1v00000Hnw6qAAB>). This Annex summarises the outcome of the public consultation and includes a brief summary of the comments received and how the comments were addressed. In total, 84 comments and 10 attachments have been received and answered/commented. Considering the relevant comments received, the AHAW Panel prepared an updated version of the draft SO.

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1. Introduction

Within the scope of this Public Consultation, EFSA wishes to consult interested parties about its opinion for the European Commission (EC) mandate entitled Scientific Opinion on the Welfare of pigs on farm. This has been produced by experts of the EFSA pig working group (WG). It addresses the terms of reference (ToRs) of the EC mandate requesting EFSA to review available scientific literature to provide a sound scientific basis for future legislative proposals in relation to the welfare of pigs on farm.

The current document includes EFSA's interpretation of the general ToRs and three other sections addressing parts of the Common ToRs, i.e: the description of the pig categories, the husbandry systems and the welfare consequences that have been considered as the most relevant for pigs, including related animal-based measures (ABMs). In compliance with the mandate, the relevance of the welfare consequences was assessed based on expert opinion combining the severity, duration and frequency of the occurrence of the welfare consequence.

EFSA WG experts also identified the husbandry systems that are the most relevant for a full welfare assessment. This Public Consultation gave stakeholders the opportunity to provide information on current husbandry practices that may have been omitted, thereby enabling EFSA to produce a more comprehensive assessment. Stakeholders were invited to comment also on the list of relevant exposure variables of the specific ToRs, provided in the Interpretation of the ToRs of this document.

In line with EFSA policy on openness and transparency, and to receive comments from the scientific community and stakeholders, EFSA released the Scientific Opinion on The Protection of Pigs for public consultation. The comments resulting from the public consultation are published together with the adopted Scientific Opinion. The Scientific Opinion shall address the relevant comments received from the public consultation.

Upon request from the European Commission, the EFSA Panel on Animal Health and Animal Welfare (AHAW) developed a Scientific Opinion on The Protection of Pigs. In line with EFSA's policy on openness and transparency, and for EFSA to receive comments on its work from the scientific community and stakeholders, EFSA engages in public consultations on key issues. Accordingly, for addressing this request, EFSA has carried out a public consultation:

The Scientific Opinion was published on EFSA's website for comments (27 July to 13 October 2021). The AHAW Panel prepared an updated version of the Scientific Opinion, taking into account the relevant comments received. The updated Scientific Opinion (SO) was discussed and adopted at the AHAW Plenary meeting on 30 June 2022 and is published in the EFSA Journal. EFSA is committed to publishing the comments received during the public consultation, as well as this technical report on the outcome of the public consultation.

2. Data and Methodologies

Appendix A of this Annex contains an explanatory text for the public consultation on the Scientific Opinion on the welfare of pigs on farm.

A total of 119 unique comments were submitted by the interested parties by means of the electronic form on the EFSA website (see <https://open.efsa.europa.eu/consultation/a0c1v00000Hnw6gAAB>). No additional comments were received by email. Among the 119 comments, 35 were empty or considered as 'test' comments and therefore not assessed by the experts. All remaining (i.e. 84 comments), comments were assessed and commented and included in Appendix B of this annex. In addition, 10 stand-alone documents were attached to some of the received comments. Generally, the comments supplemented by PDF files were included in Appendix C and answered in Appendix B, whereas comments supplemented by word files were included and answered in Appendix C.

Table 1 depicts the 15 interested parties that have participated in the public consultation, the name of the organization and the nine countries of origin. These include professional and sector (swine) associations, public agencies, research bodies, NGOs, individuals in their personal capacity and anonymous contributors. Names of individuals and personal information such as personal email addresses and phone numbers have not been taken up in this Annex for data protection reasons.

Table 1: Number of organisations and individuals submitting comments by means of the electronic form on the EFSA website

Organisation /individual	No	Organization	Country*	Number of comments (see Appendix B)	Number of attached files (see Appendix C)
Industries	8	UECBV (European Livestock and Meat Trades Union)	BE	3	1
		Central Union of Agricultural Producers and Forest Owners MTK	FI	4	0
		La Coop�ration Agricole	FR	5	0
		Producentenorganisatie Varkenshouderij (POV)	NL	3	0
		MSD Animal Health	BE	4	0
		Svaz chovatel� prasat, z.s.	CZ	7	0
		The Federation of Veterinarians of Europe (FVE)	BE	1	0
		Pedersen Nutrition Ltd.	UK	1	0
NGOs	3	Eurogroup for Animals	BE	10	4
		Compassion in World Farming EU	BE	4	1
		VIER PFOTEN- Stiftung f�r Tierschutz	DE	1	1
Individuals on personal capacity not requesting anonymity	1	Albert Vidal	ES	4	0
Contributors requesting anonymity	3	Na	DK**	32	3

*BE: Belgium; CZ: Czechia; DE: Germany; DK: Denmark; ES: Spain; FI: Finland; FR: France; NL: the Netherlands; UK: The United Kingdom. Na= not applicable

**Some anonymous contributors indicated this country in their comment.

All comments are summarised and addressed below in Appendices B and C by a narrative text for each comment (Answer). Each answered comment is followed by a statement in case this comment led to changes in the document. In case it was considered not necessary or if there were no changes made due to the comment this has been indicated in the statement: "Changes to the SO based on this comment: none". This statement was also used in case the comment was relevant for parts of the SO that was not presented for public consultation. However, for addressing these comments reference to the relevant Chapters in the SO was provided. In case there were changes made due to the comment this has been indicated in the statement: "Changes to the SO based on this comment: minor". Assessment.

The full list of comments and answers can be found in Appendices B and C and online at <https://open.efsa.europa.eu/consultation/a0c1v00000Hnw6qAAB> .

Appendix A- Explanatory text for the public consultation on the draft Scientific Opinion (SO) on the welfare of pigs on farm

EFSA's Panel on Animal Health and Welfare (AHAW) has launched an open consultation on the Scientific Opinion on the welfare of pigs.

Please note that comments will not be considered if they:

- are submitted after the closing date of the consultation
- are presented in any form other than what is provided for in the instructions and template
- are not related to the contents of the document
- contain complaints against institutions, personal accusations, irrelevant or offensive statements or material
- are related to policy or risk management aspects, which are out of the scope of EFSA's activity.
- Comments will be assessed in line with the criteria above and taken into consideration if found to be relevant.

Copyright-cleared contributions

Persons or organizations participating in a Public Consultation of EFSA are responsible for ensuring that they hold all the rights necessary for their submissions and consequent publication by EFSA. Comments should inter alia be copyright cleared taking into account EFSA's transparency policy and practice to publish all submissions. In case the submission reproduces third-party content in the form of charts, graphs or images, the required prior permissions of the right holder(s) should have been obtained by the PC respondent.

Publication of contributions

Contributions will be published and may be re-used by EFSA in a different context. It should be noted that contributions submitted by individuals in a personal capacity will be published as such, indicating the author's first and family name, unless a substantial justification for protection is provided by the respondent. Contributions submitted on behalf of an organisation are also made publicly available and attributed to the organization in question.

Appendix B- Full list of comments with reply by means of the electronic form on the EFSA website

#	Reference number in the EFSA link ¹	Section title	Organisation name	Comment
#1	118	1. Introduction for public consultation	UECBV (European Livestock and Meat Trades Union) http://www.uecbv.eu/	<p>1.1.1 Background 157-159 The «cage» concept is not defined by the Regulations. The opinion gives some answers, but a clear definition of these notions is essential in the interest of collective discussions. Then a deep discussion among all stakeholders is needed before setting any definition of ?cage?.</p> <p>The stand-alone document attached to the comment is in Appendix C</p> <p>Answer: The definition of "cage" is out of the scope of this mandate Please refer to the campaign "end the cage age" for more information about that (https://europa.eu/citizens-initiative/initiatives/details/2018/000004_en). Following this comment, in the Interpretation of ToRs of the draft Scientific Opinion (SO) it was added a clarification specifying that <i>'although EFSA is not asked to provide the definition of a cage system, in the case of pigs it is often associated with the use of stalls or crates'</i>.</p> <p>Changes to the draft SO based on this comment: none.</p>
#2	8	1. Introduction for public consultation	Respondent requested anonymity	<p>Section 1, lines 124-126, page 4, Criteria for exposure variables were related to: end the cage age + tail biting, this seems to imply that cages (space) and tail biting hazards are the main hazards for pig welfare. Can you elaborate on this a bit more? As it may be well possible that these hazards are in the end not the main welfare risks for pigs, or are they?</p> <p>Answer: These two topics were emphasised by the EC as important aspects to consider when discussing and clarifying the mandate. This information has been explained in the draft SO in the Interpretation of ToRs, Chapter 1.</p> <p>Changes to the draft SO based on this comment: minor.</p>
#3	44	1. Introduction for public consultation	Central Union of Agricultural Producers and Forest Owners MTK https://www.mtk.fi/web/en	<p>Line 122e.g. restriction of movements or increased tail-biting.</p> <p>Answer: This suggestion is in relation to a section introducing the Public Consultation. Therefore it is not included in the final SO.</p> <p>Changes to the draft SO based on this comment: none.</p>

¹ <https://open.efsa.europa.eu/consultation/a0c1v00000Hnw6qAAB>

#4	17	1.2 Interpretation of the Terms of Reference	La Coopération Agricole https://www.lacooperationagricole.coop/	<p>On a technical level, our professional organisations would like to raise several questions:</p> <ul style="list-style-type: none"> - Weighting of indicators: The report lists an exhaustive review of 30 animal welfare consequences, out of which 14 are studied more into detail. It seems essential to us to define a weighting of these 14 factors as some of them can have a greater impact than others on animal welfare. <p>Answer: Thank you for the comment it has been taken into consideration in the revision of the SO. Details of the exercise are provided in the SO (see Chapter 2-Methodology and Section 3.4).</p> <ul style="list-style-type: none"> - Harmonised measurement method for the indicators: The report suggests a definition, an interpretation, and an assessment for each indicator. Our organisations stress that the measurement method plays a key role in the sensitivity of the measurement and that these methods will have to be harmonised at European level if comparable results are to be obtained. <p>Answer: Thank you for the comment. EFSA was not requested to assess the measurement methods of the indicators. As explained in the SO, the assessment of se/sp of ABMs was only qualitative. In Chapter 9, it has been emphasised the need of a harmonised method for the ABMs collected at slaughter.</p> <ul style="list-style-type: none"> - Diversity of science to be considered: In order to properly assess animal welfare and in particular to be able to implement sustainable measures, it is essential to take into account considerations related to the welfare of people in contact with animals, both social, economic and environmental. For example, the indicators considered should be linked to the best available environmental techniques. Similarly, it will be essential to carry out an assessment of the economic consequences on farms of future recommendations that may be issued based on this report. <p>Answer: The welfare of animals can be assessed scientifically, thus independently from economic and social considerations. The latter are indeed not part of EFSA's remit and therefore considered as tasks for risk managers.</p> <p>Changes to the draft SO based on this comment: minor.</p>
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#5	48	1.2 Interpretation of the Terms of Reference	Producentenorganisatie Varkenshouderij (POV): Dutch pork producers organization https://www.pov.nl/	<p>Lines 222 - 226 quote: 'A welfare assessment may consist in two components, i.e.: the risk assessment, with identification of the negative welfare consequences (adverse effects) that occur to an animal in response to a factor, and the benefit assessment, with identification of positive welfare consequences; however, in the current document EFSA addressed the EC mandate by focusing on the adverse effects only. In the context of this opinion the adverse effects are called 'welfare consequences'. My question to EFSA is why only focus on the negative welfare consequences? By doing so, you'll never get a balanced view of the different pig husbandry systems. Certain choices in the different husbandry systems, with possible adverse affects on animal welfare, are made to prevent other, more severe adverse affects on animal welfare and/or animal health. The most common known example of this is the farrowing crate: the crate prohibits the sow to lay down on her piglets, resulting in less freedom of movement for the sow (adverse effect) and better piglet survival (positive welfare consequence). Another example would be the outdoor paddock in for example organic husbandry systems: there are certainly some adverse effects of outdoor housing (e.g. higher risk of certain infectious diseases, higher risk of locomotory disorders like OCD), but there are obviously advantages as well (possibility of playing and foraging etc.). By only focussing on the adverse effects, you miss half of the information, leading to an imbalanced and therefore incorrect assessment of the systems. Therefore I would strongly suggest to focus on both negative and positive welfare consequences of the pig husbandry systems assessed.</p> <p>Answer: We agreed on the general statement. However, the approach of EFSA across the Farm-2-Fork welfare draft SOs is to focus on negative welfare consequences (adverse effects), and the measures to prevent/correct the hazards or mitigate these adverse effects. A benefit assessment, with identification of positive welfare consequences was not the focus of this draft SO. This is reported in the Interpretation of ToRs. Aspects on positive welfare were included when pertinent, e.g. nest-building behaviours.</p> <p>Changes to the draft SO based on this comment: none.</p>
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#6	94	1.2 Interpretation of the Terms of Reference	Eurogroup for Animals https://www.eurogroupforanimals.org/	<p>Including positive welfare impacts. The document states (lines 223 to 226) 'The risk assessment, with identification of the negative welfare consequences (adverse effects) that occur to an animal in response to a factor, and the benefit assessment, with identification of positive welfare consequences; however, in the current document EFSA addressed the EC mandate by focusing on the adverse effects only. In the context of this opinion the adverse effects are called 'welfare consequences''. As demonstrated by research, especially for higher welfare systems, a lot of its impact is demonstrable with the positive impact on animal welfare. This could also mitigate the risk of no animal base measurements being available for the different welfare consequences and decrease the need for resourcing to resourced-based indicators. We recommend that positive impact is also integrated within the analysis.</p> <p>Answer: See answer to comment #5.</p> <p>Changes to the draft SO based on this comment: none.</p>
#7	9	1.2.1 Common ToRs	Respondent requested anonymity	<p>Section 1.2.1 line 282-283 page 9; why frequency of occurrence of welfare consequence and not prevalence or probability as in earlier EFSA risk assessments?</p> <p>Answer: The methodology applied to select the highly relevant welfare consequences for pigs followed the EFSA Methodological guidance for the development of animal welfare mandates in the context of the Farm-2-Fork Strategy (EFSA, AHAW Panel, 2022). This is reported in Chapter 2-methodologies of the SO.</p> <p>Changes to the draft SO based on this comment: none.</p>
#8	96	1.2.1 Common ToRs	Eurogroup for Animals https://www.eurogroupforanimals.org/	<p>Including positive welfare impacts. The document states (lines 223 to 226) 'The risk assessment, with identification of the negative welfare consequences (adverse effects) that occur to an animal in response to a factor, and the benefit assessment, with identification of positive welfare consequences; however, in the current document EFSA addressed the EC mandate by focusing on the adverse effects only. In the context of this opinion the adverse effects are called 'welfare consequences''. As demonstrated by research, especially for higher welfare systems, a lot of its impact is demonstrable with the positive impact on animal welfare. This could also mitigate the risk of no animal base measurements being available for the different welfare consequences and decrease the need for resourcing to resourced-based indicators. We recommend that positive impact is also integrated within the analysis. Moreover, relevant animal welfare consequences beyond pig welfare should be taken into consideration.</p> <p>The Stand-alone documents attached to the comment are in Appendix C</p>

				<p>Answer: See answer to comment #5.</p> <p>Please see attached for more information regarding Equine chorionic gonadotropin (formerly known as PMSG) is commonly used to increase reproductive performance of sows through synchronizing cycles and increasing the number of piglets produced per year.</p> <p>Answer: Thank you for this comment. However, the topic of the SO is the welfare of pigs; the production of eCG is out of the scope of the mandate and was not considered in the SO</p> <p>Changes to the draft SO based on this comment: none.</p>
#9	119	1.2.2 Specific scenarios	UECBV (European Livestock and Meat Trades Union) http://www.uecbv.eu/	<p>335-337: The monitoring of pig welfare at farm is legitimate and should be implemented at this level. Indeed, the implementation of this monitoring at the slaughterhouse level is not appropriate. In any case, this monitoring should not be the responsibility of the slaughterhouse. It would be the responsibility of the official authorities who have the mission of ensuring the welfare of the animals on the farm. Given the speed of the slaughter lines, the resources deployed on the slaughter line by the official authorities should be significant so as not to penalise the competitiveness of the companies. Resources should also be allocated to the management of the system, to the centralisation of data, to their analysis and to the feedback to the farmer. Moreover, the control at the slaughterhouse positions the farmer as a spectator and not as an actor responsible for a better conduct of his breeding. Observation and monitoring tools already exist for farmers to help them detect problems and quickly implement effective action plans. To measure progress at the national and European levels, these tools could be generalised, and farmers would report relevant information on the Food Chain Information. These data would then be collected by the official authorities present in the slaughterhouses. The information would be based on verifiable declarations that would be sufficient to establish an overview of the situation and measure its evolution. Finally, considering indicators based on offal (stomach ulcers, lung lesions, pericarditis, liver lesions) is not realistic given the complexity of implementation.</p> <p>The stand-alone document attached to the comment is in Appendix C</p> <p>Answer: Thank you for this information. The mandate of the European Commission request EFSA to identify the animal-based measures (ABMs) which may be recorded in the abattoir, and can be used to assess the welfare situation on farm. The allocation of responsibilities or indeed the overall governance of routine data collection in abattoirs are beyond the scope of the EFSA assessment.</p>

				Changes to the draft SO based on this comment: none.
#10	97	1.2.2 Specific scenarios	Eurogroup for Animals https://www.eurogroupforanimals.org/	<p>Limited approach to system features for gilts, dry sows and farrowing sows (lines 314 to 324). In both specific scenarios there was a very limited approach to the exposure variables (?grouping time? for gilts and dry sows and ?space allowance, nesting/enrichment material and the period that the gilt/sow is confined in a crate for farrowing females?). According to research, the differences of animal welfare impact between systems in both production phases are greatly influenced by other important exposure variables, such as design features of the systems and management (e.g. group housing- a specialised mixing pen with additional space per sow to allow subordinate sows to escape more aggressive sows, gradual familiarisation of sows via fence line contact, flexible barriers or large straw bales to escape behind, feed ad libitum for the mixing duration until sows have settled their social order; Farrowing: Sloping walls: These provide the sow with support which allows her to lie down more slowly and carefully and are preferred over farrowing rails. Piglets can lie in the area between the sloping and vertical wall which protects them from the sow and should be available at all pen walls). In light of this evidence, the scope of exposure variables should be broadened to include this evidence.</p> <p>The Stand-alone documents attached to the comment are in Appendix C</p> <p>Answer: Thank you for this comment. The topic of this comment is discussed in Chapters 4 and 5.</p> <p>Changes to the draft SO based on this comment: none.</p>

#11	105	1.2.2 Specific scenarios	<p>Compassion in World Farming EU. https://www.ciwf.eu/</p>	<p>Scenario 2. We consider that type of flooring is a relevant exposure variable as this will affect lying comfort, as well as risk of skin lesions, and the type of flooring that is provided is often different between the different types of farrowing accommodation. We consider that litter size is a relevant exposure variable as this is a variable to which the sow is exposed and which impacts on sow welfare eg in terms of farrowing duration, rate of stillbirths? This is also highly relevant to the success of, or not, (and therefore welfare experienced in) different farrowing systems with different degrees of behavioural freedom. Indeed, litter size is shown to be the single biggest determinant of piglet mortality and the biggest hurdle to success in free farrowing systems. Hence, it is crucial that it is considered as part of the review of pig welfare, in relation to the ECI. Ability to perform natural rooting behaviour is also an exposure variable which sows are subjected to and impacts their welfare, and this will obviously vary between indoor systems and those with outdoor access. It is worthy of consideration separately to exploratory behaviour, given that rooting forms the largest part of pigs' exploratory behaviour. The ability to perform this should be considered as a welfare exposure variable for all categories of pigs.</p> <p>Scenario 3 The above 2 points are also relevant to scenario 3 in relation to the sow. However both are also relevant for the piglets. Litter size is a variable to which piglets are exposed and in particular has many impacts on piglet welfare, interacting with the type of farrowing accommodation provided and piglet welfare within it. Genetics of the sow impacts on her welfare and that of the piglets. Stockmanship is an important factor that impacts on welfare of sow and piglets during this time, and that is crucial for free farrowing systems particularly as the farmer must be able to read sow behaviour... ran out of space pls see uploaded file</p> <p>Answer: Thank you for the comment. These aspects have been assessed and discussed in details in Chapters 4 and 5 of the SO.</p> <p>The stand-alone documents attached to the comment are in Appendix C, where additional answers can be retrieved.</p> <p>Changes to the Draft SO based on this comment: none.</p>
#12	60	1.2.2 Specific scenarios	<p>Respondent requested anonymity</p>	<p>Lines 314-318, page 10 Specific scenario 1: The use of individual sow stalls were banned in the UK in 1999.</p> <p>Answer: Thank you for the information; however in the SO we do not compare Member States' legislations because it is out of the scope of the mandate.</p>

				<p>Changes to the draft SO based on this comment: none.</p>
#13	23	2. Methodologies	MSD Animal Health https://www.msd-animal-health.com/	<p>Welfare aspects of vaccinations (new session proposed) Vaccines are pivotal tools to control disease in pigs. The application of these is usually done via intramuscular injection, some are administered orally via drench or water, or via needle free, intradermal injection. The welfare benefits of intradermal application of liquids or vaccines are probably based on two facts: first: there is no needle, as pressure is used to open the skin and push the vaccine into the dermis and subdermal area and second: the injected volume is low with 0.2 ml per dose. This is a mere 10 % of the usual 2 ml per dose for intramuscular piglet vaccination. A field trial in suckling piglets by Göller et al, studied the effects of IM versus ID vaccination on the welfare of the piglets. Results showed that vaccination with ID was faster, had no effect on the performance (as measured by average daily weight gain) but had a positive effect on piglet behavior; there was less lying down and more suckling observed, post vaccination with ID than IM. Scollo at al. compared intradermal to intramuscular vaccination in a study published in 2020. They looked at behavioral traits in piglets as well, but additionally they recorded them at the point of vaccination itself, along with the vocalization of the piglets. It was shown that intradermal administration of vaccines decreased negative expressions of behavioral indicators of animal welfare during and immediately after the administration of the vaccine. Escape attempts and vocalization, that are seen as a result of experienced pain, differed between groups with particular regard to the noise (dB) and length (ms) of screams, with the intradermal group expressing shorter and less loud vocalizations. The same results regarding the vocalization were found in another study. Additionally, an aversion test showed that piglets vaccinated intradermally had less reluctance to move through a test area compared to piglets after intramuscular vaccination. http://fs-1.5mpublishing.com/msd/ThePigSite/idal/IDAL%20WAY%20Posters-D80C.pdf https://www.sciencedirect.com/science/article/abs/pii/S1871141319311709?via%3Dihub</p> <p>Answer: Thank you for the references provided. However, the comparison of diverse pig vaccinations and their routes of administration is out of the scope of this mandate.</p> <p>Changes to the draft SO based on this comment: none.</p>
#14	12	2. Methodologies	Respondent requested anonymity	<p>Section 2.1 349-351 page 11: Definition of magnitude is different from EFSA RA 2012, why? In EFSA 2012 ?Magnitude: A function of the intensity and duration of a positive or negative consequence on welfare.? Section 2.1, table 3, line 358, page 11: Ranking of welfare consequences; welfare consequences are caused by different underlying hazards, for instance different pathogens or climate in case of respiratory problems, this implies that severity and duration can vary influencing the total magnitude; this seems to affect the ranking ? it totally depends of what type of ?disease? or ?hazard? you have in mind... or is e.g. worst case scenario chosen?</p>

				<p>Answer: Thank you for this comment. As explained in Chapter 2-Methodologies, in the present SO we did a qualitative, rather than a quantitative assessment of the welfare consequences. The current assessment follows the EFSA Methodological guidance for the development of animal welfare mandates in the context of the Farm To Fork Strategy (EFSA, AHAW Panel, 2022).</p> <p>Changes to the draft SO based on this comment: none.</p>
#15	13	3.1 Pig categories	Respondent requested anonymity	<p>Section 3.1, line 365 page 13: the final sentence seems not finished ?General characteristics of pigs?</p> <p>Answer: Thank you, the sentence has been reworded.</p> <p>Changes to the draft SO based on this comment: minor.</p>
#16	79	3.1.1 General characteristics of pigs	Respondent requested anonymity	<p>Does not appear in the consultation document section 3.1.1 is headed Gilts No further comment</p> <p>Answer: Thank you, the sentence has been reworded.</p> <p>Changes to the draft SO based on this comment: minor.</p>
#17	41	3.1.2 Gilts	Respondent requested anonymity	<p>L409-411, L 414-415, L421-423 (p. 14): Comment: Onset of the young females puberty and sexual maturity is hard to determine in practice, as it is influenced by many factors. Therefore, legislation should be related to measurable parameters and/or actual events such as mating.</p> <p>Answer: Thank you for the comment; however, EFSA performs risk assessment. Providing legislation is not EFSA's remit.</p> <p>3.1.3.1. Definition, biology and background info on the production cycle L525-526 (p. 16): Comment: there are also other evidence like Pedersen et al. 2011 that piglets suckled on a specific teat or a specific teat pair. Some piglets always laid on top and suckled on a specific teat pair, whereas other piglets suckled on a specific teat.</p> <p>Answer: Thank you, this reference has been included in the text.</p> <p>L528-530 (p. 16): Comment: Pedersen et al (2011) reported milk ejection of 8-10 sec L538-539 (p. 17): Comment: Quesnel et al (2008) presented phenotypic correlations between sow reproductive characteristics and piglet birth weight. Unfortunately, we require genetic</p>

				<p>correlations - not phenotypic correlations - between traits to foresee and assess the consequences of selection. Selection for number of live piglets at day 5 increases both total number of piglets born and piglet survival (Nielsen et al. 2013 , Su et al.2007). This is despite there being an unfavourable genetic correlation between number of total piglets born and piglet survival. Fortunately, this correlation is only -0.2, much less than -1, which makes it possible to genetically improve total number of piglets born and piglet survival simultaneously.</p> <p>Answer: Thank you, this topic and the scientific evidence are considered in Chapter 5 of the SO.</p> <p>Changes to the draft SO based on this comment: minor.</p>
#18	100	3.1.2 Gilts	Eurogroup for Animals https://www.eurogroupforanimals.org/	<p>Genetic selection consequences (lines 450 to 468) - This paragraph of the document focuses solely on solutions to mitigate the risk of a genetic selection problem for hyperprolific females. It should include at least a reference to the benefits of genetically selecting for smaller litter size, presenting it as a solution as well.</p> <p>Answer: Thank you for this comment; this topic and the relevant scientific evidence are discussed in Chapter 5 of the SO.</p> <p>Changes to the draft SO based on this comment: none.</p>
#19	81	3.1.2 Gilts	Respondent requested anonymity	<p>Numbered 3.1.1. in consultation document No further comment</p> <p>Thank you, the text has been amended.</p> <p>Changes to the draft SO based on this comment: minor.</p>
#20	93	3.1.3 Sows	Eurogroup for Animals https://www.eurogroupforanimals.org/	<p>Sows? definitions and biology (section 3.1.2 - lines 479 to 481) - in the previous sections of the document it was several times referenced that the behaviour of domestic pigs was not too distant from wild pigs. Based on that reference, the argument in these lines should not be presented. Also, sows don't present a seasonal reproductive period on farms, due to management techniques such as early weaning and hormone use. So this should not be identified as a difference in behaviour, but rather a difference in management of the animal.</p> <p>Answer: Thank you, this aspect has been included in the text.</p> <p>Changes to the draft SO based on this comment: minor.</p>
#21	52	3.1.3 Sows	Respondent requested anonymity	<p>Numbered 3.1.2. in consultation document. No further comment</p>

				<p>Answer: Thank you, it has been amended.</p> <p>Changes to the draft SO based on this comment: minor.</p>
#22	4	3.1.3 Sows	Albert Vidal (Submission on Personal Capacity)	<p>Sows, if they are not thirsty, hungry or in heat.... they love to rest. Since we have lose gestation sows we are learning a lot about them. We know that they do not like to be in open spaces, they are always looking for walls, corners or self caching crates. I do not agree that t if they are not active is because they have a behaviour problem... but al the way around. Sows, like wild animals they are hidden, they only get out wen they need something, when they are hidden they feel comfortable and safe. In the self caching crates systems it is very evident this situation and instead of being the humans interpreting what do the sows like, we should inferr it from their behaviour when they can chose what to do.</p> <p>Answer: We partially agree with the comment: it is not fully representative of the welfare and behaviour of the sows. This is explained in Section 3.2.</p> <p>Changes to the draft SO based on this comment: none.</p>
#23	28	3.1.4 Piglets	Respondent requested anonymity	<p>L567-568 (p. 17): Comment: Some farmers seek to minimize the regrouping at weaning and try to keep litters together as much as possible depending on the size and number of nursery pens. The overall goal is to minimize spread of diseases between animals.</p> <p>Answer: Thank you for the comment. The wording has been slightly modified. Regrouping based on size and number of nursery pens is common.</p> <p>Changes to the draft SO based on this comment: minor.</p>
#24	53	3.1.4 Piglets	Respondent requested anonymity	<p>Numbered 3.1.3. in consultation document No further comment</p> <p>Answer: Thank you, it has been amended.</p> <p>Changes to the draft SO based on this comment: minor.</p>
#25	37	3.1.5 Weaners	Respondent requested anonymity	<p>L567-568 (p. 17): Comment: Some farmers seek to minimize the regrouping at weaning and try to keep litters together as much as possible depending on the size and number of nursery pens. The overall goal is to minimize spread of diseases between animals.</p> <p>Answer: See answer to comment #23.</p> <p>Changes to the draft SO based on this comment: minor.</p>

#26	54	3.1.5 Weaners	Respondent requested anonymity	<p>Numbered 3.1.4. in consultation document No further comment</p> <p>Answer: Thank you, it has been amended.</p> <p>Changes to the draft SO based on this comment: minor.</p>
#27	38	3.1.6 Rearing pigs	Respondent requested anonymity	<p>L615-617 (p. 18): Comment: It is a generalizing opinion - which does not consider that breeding systems are always balanced to some extent. Farm animal breeders are in effect already looking at sustainability-related traits (Gamborg & Sandoe, 2005, Neeteson van Nieuwenhoven et al., 2013).</p> <p>Answer: Thank you for the comment. We have assessed some aspects of sustainability-related traits which may have an effect on pig welfare, e.g. litter size (Chapter 5).</p> <p>Changes to the draft SO based on this comment: none.</p>
#28	55	3.1.6 Rearing pigs	Respondent requested anonymity	<p>Numbered 3.1.5. in consultation document No further comment</p> <p>Answer: Thank you, the text has been amended.</p> <p>Changes to the draft SO based on this comment: minor.</p>
#29	56	3.1.7 Boars	Respondent requested anonymity	<p>Numbered 3.1.6. in consultation document No further comment</p> <p>Answer: Thank you, the text has been amended.</p> <p>Changes to the draft SO based on this comment: minor.</p>
#30	58	3.1.8 Animals in need of treatment or separation	Respondent requested anonymity	<p>Numbered 3.1.7. in consultation document No further comment</p> <p>Answer: Thank you, the text has been amended.</p> <p>Changes to the draft SO based on this comment: minor.</p>

#31	108	3.2 Describing Pig husbandry systems	Svaz chovatelů prasat, z.s., https://www.schpcm.cz/	<p>Table 5: - In individual stalls (dry and lactating) group stress is very limited and definitely lower than group stress in group housing. - In modern system there is no one which could cause prolonged hunger. - Group stress for piglets is same for all systems and it is more or less natural because there is no difference in group (one litter). - Inability to perform exploratory or foraging behaviour is not connected with housing system but more with management techniques ? manipulable material could be placed to majority of systems.</p> <p>Answer: Thank you for the comment. In the SO we cite evidence reporting group stress in both sow individual and group- housing systems. Moreover, there is scientific evidence of prolonged hunger in dry sow systems, and those are included in the SO. We agree group stress in piglets is present in all systems. However, most indoor based systems are slurry based and rootable materials are difficult to implement. All of these elements are included in the SO.</p> <p>Changes to the draft SO based on this comment: none.</p>
#32	49	3.2 Describing Pig husbandry systems	Producentenorganisatie Varkenshouderij (POV): Dutch pork producers organization https://www.pov.nl/	<p>Table 4 describes the pig husbandry systems with a full assessment and with a narrative description. The individual housing in temporary crates of farrowing and lactating sows and piglets isn't part of the full assessment. I think this is a missed opportunity, because this system may become highly relevant in the next years in the light of the ECI End of cage. Many pig farmers in Europe are already changing the housing systems of their farm from individual housing in crates to individual housing in temporary crates. This system seems to be quite promising and I think it's rather important to have a scientific assessment from EFSA on it. This might help farmers and policy makers all over Europe with the difficult and complex choices that have to be made concerning the housing of farrowing and lactating sows and piglets.</p> <p>Answer: Thank you for the comment. In the SO it has been added that in these systems, the welfare consequences experienced by sows are likely to be similar to the ones identified in the case of individual farrowing crates, during the first part of lactation, and to the ones experienced in pens, during the second phase of lactation up to weaning. Temporary farrowing crates are discussed in more detail in Specific ToRs 2 and 3 (Chapter 5).</p> <p>Changes to the draft SO based on this comment: minor.</p>
#33	98	3.2 Describing Pig husbandry systems	Eurogroup for Animals https://www.eurogroupforanimals.org/	<p>Temporary crates should be included in the full assessment in the common ToRs and not just as a narrative description in the common ToRs. See rationale attached</p> <p>Answer: See answer to comment #32.</p>

				<p>The stand-alone documents attached to the comment are in Appendix C, where additional answers can be retrieved.</p> <p>Changes to the draft SO based on this comment: minor.</p>
#34	11	3.2.1 Overview of pig husbandry systems per animal category	Respondent requested anonymity	<p>Section 3.2.1 Table 4, Main husbandry systems are provided. Is it possible to given an estimation of the level of occurrence (/probability) in the EU of each husbandry system per pig category? Furthermore, the study focusses on the main husbandry systems practiced which is most important for the current pig population. However, there seems to be a trend toward new more sustainable systems in terms of climate and in some countries also welfare. Is it possible to consider welfare risks already on forehand of such innovative systems as some systems will be the future? Is it legitimate to focus on the mainstream only?</p> <p>Answer: Thank you for the comment. However, we do not have an estimation of the prevalence for each husbandry system per pig category in the EU. It is unclear to which innovative systems the comment is referring to and which ones may have missed.</p> <p>Changes to the draft SO based on this comment: none.</p>
#35	101	3.2.1 Overview of pig husbandry systems per animal category	Eurogroup for Animals https://www.eurogroupforanimals.org/	<p>Systems with temporary crating were only described but not included in the more detailed analysis. These systems will probably be the next step to be discussed under the European Commission legislative steps towards the ban on cages for pigs. These systems bear animal welfare consequences that differ from the individual pen systems without temporary crating options, so they need to be analysed separately. From the different design (e.g. smaller space allowance) to the management practices and the risk of sows frustration on the first days due to the confinement should be taken into consideration, regarding the Animal Based measurements selected. Co-legislators will need this information when deciding what systems will be allowed and considered cage-free as well as what recommendations for better management to provide (e.g. duration of days in confinement allowed before and after farrowing). It is important to note that pens which are designed for temporary crating of the sow during farrowing and for a few days afterwards, often do not have the appropriate design (quantity and quality of space) to function well as a true free-farrowing pen. As such, temporary crating pens that are used ?open? are more likely to yield poor results than a pen that is principally designed to be used without confinement,. Temporary crating pens also lack the other design features of true free-farrowing pens which optimise maternal behaviour and maximise performance,</p>

				<p>The stand-alone documents attached to the comment are in Appendix C</p> <p>Answer: See answer to comment #32. This information is clarified Section 3.3.3. Changes to the draft SO based on this comment: minor.</p>
#36	25	3.2.2 Gilts and dry sows systems	MSD Animal Health https://www.msd-animal-health.com/	<p>The use of crates in gestation has proven to be detrimental for the fetus development. We suggest reviewing the following scientific publication: - Growth of the Swine Fetus - https://doi.org/10.2527/jas1965.243711x https://academic.oup.com/jas/article-abstract/24/3/711/4701271?redirectedFrom=fulltext</p> <p>Answer: Thank you for the reference. EFSA experts have revised the relevant publications and agreed that no changes were needed to the text.</p> <p>Changes to the draft SO based on this comment: none.</p>
#37	110	3.2.2 Gilts and dry sows systems	Svaz chovatelů prasat, z.s., https://www.schpcm.cz/	<p>Row 687-695: System where gilts are raised together with finishing pigs is very uncommon. Needs of animals needed as replacement gilts are completely different to those of finishing pigs.</p> <p>Answer: Thank you for the comment. The text was amended to demonstrate that there is a diversity of systems for rearing the replacement gilts.</p> <p>This description is based on very old-fashioned and obsolete system. Row 753: Dump feeding is very old method which is not used anymore. Very common is ESF or feeding in through.</p> <p>Answer: Dump feeding systems are still in use in the EU, although not widespread.</p> <p>Changes to the draft SO based on this comment: minor.</p>
#38	107	3.2.2 Gilts and dry sows systems	The Federation of Veterinarians of Europe (FVE), which represents the veterinary profession in Europe. Members of FVE are national veterinary associations or chambers and through them FVE represents about 300 000 veterinarians in 39 countries. https://fve.org/	<p>Gilts are either produced in some farms for their necessity or purchased. The time of purchase is not adequate as several farms are buying piglets just after weaning or gilts at 30 kg. Nobody that has PRRS positive farm could buy older animals with an adequate biosecurity approach and need to send them in quarantine, preferably for 3 months after acclimatization. Also the gilt self-producers do not rear gilts together with fatteners, or only seldom do that. Gilts need to be reared in a different way, with more light, more space and different feed to have the best result in terms of fertility and piglets production.</p> <p>Answer: See answer to first part of comment #37.</p>

				<p>Changes to the draft SO based on this comment: minor.</p>
#39	29	3.2.2 Gilts and dry sows systems	Respondent requested anonymity	<p>L697-698 (p. 20): Comment: In Denmark, free access stalls are used for insemination to make sure the sows do not experience excessive stress, and to provide safe working conditions for the inseminator. This type of housing should therefore be included in ?specially designed mating areas?</p> <p>L716-718 (p. 21): Comment: Denmark has legislation from 1.1.2015, which will be implemented in all herds by 1.1.2035, which states that all sows must be loose from weaning to farrowing.</p> <p>L729-730, L734-735 (p. 21): Comment: there is no background for these conclusions. Both big and small herds in Denmark have both group-structures. Therefore, this section has not taken housing conditions in Europe into consideration.</p> <p>While it is clear that breeding goals have broadened in recent decades, evidence linking genetic selection strategies to welfare issues in rearing pigs is still valid</p> <p>L736-738 (p. 21): Comment: There should not only be focus on the size of the area, but also on the quality of the area provid-ed. There is no documentation for this.</p> <p>L754-755, L760-764, L777-779 (p. 21-22): Comment: Descriptions and recommendations do not align with production sys-tems in Denmark. There should be descriptions that are representative for all of Europe. The recommendations are not well-documented, for example 8 sows per feeder.</p> <p>Answer: Thank you for the information, that has been included in the SO. However, Danish legislation was not included because a comparison of Member States’ national legislations it is out of the scope of the mandate. Aspects on the quality of space have been described in the SO.</p> <p>Changes to the draft SO based on this comment: minor.</p>
#40	67	3.2.2 Gilts and dry sows systems	Respondent requested anonymity	<p>Page 21, lines 710-724, Section 3.2.2.2 Individual housing in stalls, The use of individual sow stalls were banned in the UK in 1999.</p> <p>Answer: Thank you for the information, however in the SO we do not compare Member States’ legislations because it is out of the scope of the mandate.</p> <p>Changes to the draft SO based on this comment: none.</p>

#41	109	3.2.3 Farrowing and lactation systems	Svaz chovatelů prasat, z.s., https://www.schpcm.cz/	<p>Row 843: Size of farrowing crates increased considerably during last years because of bigger size of animals. Increase of body size did not resulted to higher discomfort. Row 851 - 854: Risk of crushing was main reason why farrowing crates was used. Risk of crushing is much lower than in free farrowing pen. Row 858 - 859: There is sufficient space for piglets in farrowing pens. All piglets can without prob-blems lay or suck at once.</p> <p>Answer: Thank you, this information has been added. The topic of this comment is discussed in Chapter 5 of the SO. We agree that in normal litter size together with optimal crate design all piglets can suckle simultaneously, and rest in a sufficiently large creep area.</p> <p>Changes to the draft SO based on this comment: minor.</p>
#42	40	3.2.3 Farrowing and lactation systems	Respondent requested anonymity	<p>3.2.3.3 Individual farrowing crates: L837-839 (p. 23): Comment: Not all farrowing crates have bars above the sows ? and since 2003, the recommendations have been 65 cm at the front and up to 90 cm at the back (Moustsen & Poulsen, 2004) (In Danish) L841-842 (p. 23): Comment: But sows have not increased in size since 2011 (Nielsen et al., 2018) L843 (p. 23): Comment: so has recommendation for crate dimensions in some countries, like Denmark (Moustsen & Poulsen, 2004) 3.2.3.5 Indoor individual housing in farrowing pens L874 (p. 24): Comment: In some countries like Denmark, organic sows are outdoors</p> <p>Answer: Thank you, the text has been updated accordingly.</p> <p>Changes to the draft SO based on this comment: minor.</p>

#43	104	3.2.3 Farrowing and lactation systems	Compassion in World Farming EU. https://www.ciwf.eu/	<p>It is important that welfare of both sows and piglets is also considered in temporary farrowing crates. It is not clear whether these will be included within the category of ?individual farrowing crates?? Temporary crates are still a farrowing crate, but one that is (potentially) later opened up to allow the sow movement during part of her lactation. We are very concerned that temporary crates should not be seen as a ?cage-free? solution, nor a half-way step. They present many of the same welfare consequences for the sow (inability to nest build, severe restriction of movement, inability to perform maternal behaviour, lying comfort, enrichment provision, flooring suitability, ability to defecate away from lying area, etc etc). Furthermore, most temporary crate systems are not designed to function well (with low piglet mortality) when the sow is free throughout farrowing and lactation. Therefore, farmers using these systems will invariably keep the sows confined during farrowing. Furthermore, it is a very real risk that sows will be left crated for longer than the stipulated number of days, this is because there can often be a rise in mortality , and / or workload becomes higher once sows are free in these systems. It will not realistically be possible to reliably monitor or control when sows are released. Hence, the installation of temporary crates would be a very costly investment and change of system, but without achieving the goal of a cage-free environment for the sow. Furthermore, the systems, once installed, will not be changed for many years. As such, we see temporary crates as a great delay to achieving free farrowing for sows and thus a great delay to achieving acceptable welfare for sows. Free farrowing requires a designed zero confinement free farrowing pen from the outset. Please see uploaded file for references</p> <p>The stand-alone document attached to the comment is in Appendix C.</p> <p>Answer: Thank you for the comment. The topic of this comment is discussed in Chapter 5 of the SO.</p> <p>Changes to the draft SO based on this comment: none.</p>
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#44	66	3.2.3 Farrowing and lactation systems	Respondent requested anonymity	<p>Page 23, lines 851-854, Section 3.2.3.3 Individual farrowing crates. The paragraph states that farrowing crates were introduced to reduce piglet mortality, but goes on to focus too strongly on the negatives of farrowing crates and states no positives to give a balance. Reviews and meta-analysis studies such as Glencorse et al (2019) could be referenced to give a more rounded and less biased view. Ref: Glencorse, D., Plush, K., Hazel, S., D'Souza, D. and Hebart, M., 2019. Impact of non-confinement accommodation on farrowing performance: A systematic review and meta-analysis of farrowing crates versus pens. <i>Animals</i>, 9(11), p.957. https://www.mdpi.com/2076-2615/9/11/957 Page 24, lines 870-872, Section 3.2.3.4 Indoor individual housing in temporary farrowing crates. States that pen size for systems with temporary crating is larger than that for conventional farrowing crates, ranging from 5.5 to 7.5 m² (Chidgey et al., 2015; Hales et al., 2016; Goumon et al., 2018; Lohmeier et al., 2020; Oczak et al., 2020). This is not the case for all designs of temporary crating system. Not all pens are larger than a conventional farrowing crate For example, the 360 was designed by Midland Pig Producers in the UK. It is built on the same footprint as a conventional crate with a fully slatted floor. It has a flexible design with moveable restraining bars, which can give the animal space to turn around in the pen but also enables close containment when necessary. http://www.quality-equipment.co.uk/360-freedom-farrower/ https://www.freefarrowing.org/farrowing-systems/temporary-crating/360-farrower/</p> <p>Answer: See answer to first part of comment #43</p> <p>Changes to the draft SO based on this comment: none.</p>
#45	26	3.2.5 Weaner systems	Respondent requested anonymity	<p>3.2.5.1 General management: L984-985 (p. 26): Comment: Liquid feeding is not always supplied restricted but can as well be fed ad libitum. 3.2.5.2 Indoor group housing: L987-989 (p. 26): Comment: Fully slatted pens are not allowed for weaners in Denmark. According to Danish legislation at least half of the minimum space allowance for the concerned weight group of pigs should be solid or drained (less than 10% apertures) L992-994 (p. 26): Comment: This is not the case in Denmark. To our knowledge only one or two producers in Denmark have invested in these balcony systems (Bjarne Kongsgaard, Ikadan, personlig medd.). As far as we know these balconies are not used in Germany either and are only common in The Netherlands. L998-999 (p. 27): Comment: According to Danish legislation and interpretation of recommendations from the food authorities hanging toys are not considered as enrichment material. Enrichment material should be supplied at floor level. L1004-1007 (p. 27): Comment: In Denmark the most common pen type is a two-climate pen with a covered solid lying area and a room temperature around 24 degrees C for piglets weaned at 26-28 days of age. The temporary roofing is not temporary and is regulated and used according to the pigs lying behavior during the whole weaner period.</p>

				<p>Answer: Thank you for the information; however a comparison of Member States' national legislations it is out of the scope of the mandate . General information has been included in the draft SO.</p> <p>Changes to the draft SO based on this comment: minor.</p>
#46	30	3.2.6 Rearing pig systems	Respondent requested anonymity	<p>L1038-1039 (p. 27): Comment: Grouping rearing pigs by gender could also be relevant regarding castrated males. L1039-1041 (p. 27): Comment: Large groups are still not common in Denmark. Few herds use sorting scales and have group sizes around 350-450 pigs.</p> <p>Answer: Thank you, the text has been modified accordingly, even if we do not aim at referring to one or more specific Member State(s).</p> <p>Changes to the draft SO based on this comment: minor.</p>
#47	39	3.2.8 Hospital and separation pens	Respondent requested anonymity	<p>L1176-1177 (p. 30): Comment: Hospital pens must ensure optimal conditions in relation to the injury / challenge the animal has. Floor design alone does not ensure this; it is the surface that is important. For example, a fully drained floor with bedding material will appear dry and soft.</p> <p>Answer: Thank you, the text has been modified accordingly.</p> <p>Changes to the draft SO based on this comment: minor.</p>
#48	10	3.3 Describing Pig welfare: most relevant welfare consequences for pigs	Respondent requested anonymity	<p>Section 3.3 1189-1191 page 30; is it possible to provide the list/data with expert ranges of severity, duration and frequency of occurrence in order to be able to understand the ranking (what is highly relevant)? And/or is it possible to provide at least an indication of the level of uncertainty to see where initial consensus among experts was high and where not. Section 3 Table 5, page 31 Restriction of movement: Piglets in individual crates not? Piglets bumping against crate while trying to run. Throughout document; sometimes rather old literature is used, how certain is it that things have not changed in the meantime due to e.g. genetic selection? E.g. section 3.3.1 lines 32, 1230-1238, page 32 Is it possible to use more recent literature to substantiate the text? Not the least to avoid scepticism about still existing motivation for such behaviours in current genetic lines used.</p> <p>Answer: Thank you for the comments. The results of the exercise for classifying the welfare consequence can be consulted in Appendix B in the SO. Sources of uncertainty and explanation of how uncertainty was assessed is included in the SO. In addition, the certainty range has been included in the Conclusions. The references used in the SO are the ones that were considered relevant by the</p>

				<p>experts; aspects of genetic selection were included when relevant (e.g. in a discussion on large litters - in Chapter 5).</p> <p>Changes to the draft SO based on this comment: minor.</p>
#49	50	3.3 Describing Pig welfare: most relevant welfare consequences for pigs	<p>Producentenorganisatie Varkenshouderij (POV): Dutch pork producers organization https://www.pov.nl/</p>	<p>Table 5 describes the fully assessed pig husbandry systems with the welfare consequences ranked as having high relevance. I don't know the full considerations that led to this table, but I miss quite a lot of welfare consequences for some husbandry systems. For example: * locomotory problems in outdoor paddocks: disorders like OCD are a point of concern for pigs in outdoor paddocks * the same could be said about soft tissue lesions and integument damage, respiratory disorders and gastro-enteric disorders: all of these occur in outdoor paddocks as well and are as a result relevant welfare consequences. Practical example: tail biting also occurs in organic raised pigs and has a huge impact on animal welfare. My conclusion is that table 5 gives an imbalanced overview of the different pig husbandry systems and that's unfortunate, because it's a comprehensive, well-substantiated document.</p> <p>Answer: We recognize that there are different opinions on the classification of welfare consequences. However, the final classification was obtained through a consensus exercise among the experts. The exercise is explained in Chapter 2 and the results are visualised in Table B1</p> <p>Changes to the draft SO based on this comment: none.</p>
#50	103	3.3 Describing Pig welfare: most relevant welfare consequences for pigs	<p>Compassion in World Farming EU. https://www.ciwf.eu/</p>	<p>Gilts and Dry Sows: Locomotory disorders (including lameness) and Soft tissue lesions and integument damage should be of high relevance for gilts and dry sows in individual stalls. Farrowing and Lactating Sows: Inability to perform exploratory or foraging behaviour should be of high relevance for farrowing and lactating sows in temporary crating systems, which often do not have solid flooring and therefore cannot provide adequate enrichment / foraging material. Gastro-enteric disorders should be considered for high relevance for sows in farrowing crates ? in relation to stomach ulcers. Locomotory disorders (including lameness) should be of high relevance for farrowing sows in farrowing crates. Piglets: Restriction of movement and Resting problems should be considered of high relevance for piglets in farrowing crates. Soft tissue lesions and integument damage should be considered for piglets in artificial weaning systems ? foot problems from slatted flooring? Weaners: Resting problems should be of high relevance for Indoor group? ? these systems often have no bedding and pigs have to lie on hard, slatted flooring. Prolonged hunger should be considered if there is a lack of high fibre food in the diet, and without the opportunity to forage outdoors in soil. Rearing pigs: Prolonged hunger should be considered if there is a lack of high fibre food in the diet, and without the opportunity to forage outdoors in soil Boars: Resting problems should be of high relevance if boars do not have comfortable floor to lie on and without bedding.</p>

				<p>Answer: See answer to comment #49.</p> <p>Changes to the draft SO based on this comment: none</p>
#51	111	3.3.1 Restriction of movement and related ABMs	Svaz chovatelů prasat, z.s., https://www.schpcm.cz/	<p>Row 1282: Tail biting is multifactorial problem. It is misleading to attribute it just to one factor. It is very complex problem, which needs further study. Table 7: Nesting behaviour is connected with farrowing crates and not with gilts and dry sows. Nest is built just before farrowing at time when gilts and sows are at farrowing stable.</p> <p>Answer: Thank you for the comment. The section that has been commented assesses restriction of movement; however, tail biting is considered throughout the SO also in other circumstances, and a detailed assessment of hazards is included in Chapter 7.</p> <p>Changes to the draft SO based on this comment: none.</p>
#52	18	3.3.1 Restriction of movement and related ABMs	La Coopération Agricole https://www.lacooperationagricole.coop/	<p>Page 33, line 296: A percentage should be approximated instead of "X%".</p> <p>Answer: Thank you for the comment, the text has been amended accordingly.</p> <p>Changes to the draft SO based on this comment: minor.</p>
#53	31	3.3.1 Restriction of movement and related ABMs	Respondent requested anonymity	<p>File attached with comments</p> <p>The stand-alone documents attached to the comment are in Appendix C, where relevant answers can be retrieved.</p>
#54	95	3.3.1 Restriction of movement and related ABMs	Eurogroup for Animals https://www.eurogroupforanimals.org/	<p>Restriction of movement, resting problems and inability to perform sucking behaviour: Piglets in individual crates were not considered at risk of restriction of movement. Nevertheless in the document further above it states (lines 858 and 859) that 'Many current farrowing crate designs do not allow sufficient space for hyperprolific litters (Pedersen et al., 2013b). Piglets can neither rest together in a thermally comfortable area nor have unobstructed suckling?'. Given the evidence, this welfare consequence should also be considered for piglets in farrowing crates systems.</p> <p>Answer: For an overview of the results of the 'welfare consequences classification exercise', see Appendix B of the SO.</p> <p>Changes to the draft SO based on this comment: none.</p>

#55	112	3.3.10 Prolonged thirst and related ABMs	Svaz chovatelů prasat, z.s., https://www.schpcm.cz/	<p>Row 1867-1896: Prolonged thirst is not connected with any housing system. It is problem of herd management. At present moment all animals have to have instant access to fresh water according to legal standards.</p> <p>Answer: Prolonged thirst has been identified as highly relevant welfare consequence for piglets in all husbandry systems (except artificial rearing systems). Main hazards leading to it might be management-related; this is explained in the SO.</p> <p>Changes to the draft SO based on this comment: none.</p>
#56	42	3.3.10 Prolonged thirst and related ABMs	Respondent requested anonymity	<p>L1878, L1888-1890 (p. 54): Comment; As stated by the WG in several places, pigs in outdoor production re-mains in the hut or hut+fender for the first 7-10 days, so regardless of outdoor temperature, they do not pay visit to the water supply in the paddocks since the water supply very seldomly is within the hut or hut+fender</p> <p>Answer: Piglets may want to have access to the water supply before the 10 days, therefore the reasoning behind how this welfare consequence was classified remain valid.</p> <p>Changes to the draft SO based on this comment: none.</p>
#57	22	3.3.11 Heat stress and related ABMs	MSD Animal Health https://www.msd-animal-health.com/	<p>We also suggest considering the following publications for further technical considerations: 1. Biology of heat stress; the nexus between intestinal hyperpermeability and swine reproduction - https://pubmed.ncbi.nlm.nih.gov/32531658/ 2. Acute heat stress effects on heat production and respiration rate in swine - https://elibrary.asabe.org/abstract.asp?aid=17216</p> <p>Answer: Thank you for the papers. EFSA experts have revised the relevant publications and agreed that no changes were needed to the text.</p> <p>Changes to the draft SO based on this comment: none.</p>
#58	20	3.3.11 Heat stress and related ABMs	La Coopération Agricole https://www.lacooperationagricole.coop/	<p>Page 55: The title of Table 21 should probably refer to heat stress and not to the ability to express maternal behaviours.</p> <p>Answer: Thank you, it has been amended.</p> <p>Changes to the draft SO based on this comment: minor.</p>

#59	43	3.3.11 Heat stress and related ABMs	Respondent requested anonymity	<p>L1905 (p. 55): Comments: Skin temperature is mentioned, which has limited correlation to core temperature of the sow, however, the WG mainly refers to and use respiratory rate as indicator for decreased welfare ? so overall, no comments</p> <p>Answer: Respiratory rate is reported as an AMB of heat stress.</p> <p>L1922-1924 Table 21 (p. 55-56): Comment: It may be worth mentioning that measure of skin temperatures (measured with same device, by the same person, at the same spot on the sow) is showing significantly higher variations than measure of rectal temperature Ratio of lying in sternal position/lying laterally (all pigs): Comment: It may be worth mentioning that the heat loss through conduction to the floor will be very much dependent on the floor material (concrete, cast iron, coated iron, plastic)</p> <p>Answer: Thank you for the comment. Environmental temperature might also be reflected in skin temperature and, therefore, this ABMs was considered not specific.</p> <p>Changes to the draft SO based on this comment: none.</p>
#60	102	3.3.11 Heat stress and related ABMs	Eurogroup for Animals https://www.eurogroupforanimals.org/	<p>Heat stress: On lines 617 and 618 of the document it is stated that ?Heat production is also increased in modern genotypes (Brown-Brandl et al., 2001), potentially making them more susceptible to heat stress (Forcada and Albecia, 2019)?. For these reasons, heat stress should also be assessed as a welfare consequence in rearing pigs in indoor systems.</p> <p>Answer: Thank you. The expert did not classified this welfare consequence as highly relevant for rearing pig. For an overview of the results of the 'welfare consequences classification exercise', see Appendix B of the SO.</p> <p>Changes to the draft SO based on this comment: none.</p>

#61	34	3.3.12 Cold stress and related ABMs	Respondent requested anonymity	<p>L1944, L1975-1978 Table 23 (p. 57-58): Comment: The skin temperature will be influenced by room temperature, meaning that ?no cold stress? does not equal ?normal skin temperature. Comment: The lying sternal/lateral also depends on the stage in reproductive cycle, where late pregnancy sows tend lay more lateral, and sows within the first few days post farrowing are lying lateral the majority of the time (Hales et al., 2016).</p> <p>Answer: At the surface level, the temperature of the body is directly influenced by the ambient temperature. In this section EFSA considers outdoor rearing, where the temperature could be very low in the winter months. WG experts agree with the respondent that lying on sternal/lateral position can be influenced by the reproductive cycle, but in this section, we focused on piglets and weaners kept in outdoor systems, and the reference suggested is not considered relevant.</p> <p>Changes to the draft SO based on this comment: none.</p>
#62	99	3.3.12 Cold stress and related ABMs	Eurogroup for Animals https://www.eurogroupforanimals.org/	<p>Cold stress: On lines 590 to 592 of the paper it is referred that: ?the reduction in energy intake from feed at the time of weaning increases the Lower Critical Temperature of the piglet, and it becomes more sensitive to cold stress and temperature fluctuations which can increase susceptibility to infection (Le Dividitch and Herpin, 1994)?. Given this evidence, plus the fact that a lot of indoor systems for weaners in Europe do not have proper heating or have a lot of ventilation and problems, the welfare impact of cold stress for indoor produced weaner should also be considered a relevant welfare consequence.</p> <p>Answer: We agree with the general comment, however the prevalence and severity of this welfare consequence have been judged lower compared to others. Please see Appendix B for the full evaluation of the welfare consequences.</p> <p>Changes to the draft SO based on this comment: none.</p>
#63	47	3.3.14 Soft tissue lesions and integument damage and related ABMs	Central Union of Agricultural Producers and Forest Owners MTK https://www.mtk.fi/web/en	<p>Main points in management to prevent tail-biting: space allowance in the pen, all pigs are able to eat at the same time (feeding system and enough length to allow all pigs to eat at the same time), not too cold, not too hot, aircondition, enrichment material (any novel material often enough), fiber to chew (straw, hay), living in same group etc. https://porcinehealthmanagement.biomedcentral.com/articles/10.1186/2055-5660-1-2</p> <p>Answer: Thank you for the comment. A comprehensive assessment of tail biting was done throughout the SO; see in particular Chapters 6, 7 and 9.</p> <p>Changes to the draft SO based on this comment: none.</p>

#64	14	3.3.15 Respiratory disorders and related ABMs	Pedersen Nutrition Ltd. https://www.pedersennutrition.co.uk/	<p>The cause of stomach ulcers is a lot more than particle size and stress. The main factor is ammonia in the stomach. On www.farmingacademy.eu is a course about it, which explain the mode of action.</p> <p>Answer: Thank you for the comment. More information has been added accordingly.</p> <p>Changes to the draft SO based on this comment: minor.</p>
#65	27	3.3.2 Resting problems and related ABMs	Respondent requested anonymity	<p>L1358, L1359-1360, L1375-1376 (p. 36-37): Comment: Acknowledge point, but confinement does ensure sows cannot soil the floor in the nest, as is a significant risk in many pens for loose sows. In addition, when sows are in farrowing crates, there are no sows adjacent to them because each crate is in a 'pen' to house piglets too. In that way the space for sows in farrowing crates are greater than in stalls in eg. mating units. Thirdly, it is recommended to ensure piglets easy access to the teats of the sows in farrowing crates, and wherefore ensure inside width of crate to be more than the depth of the sows.</p> <p>Answer: Scientific evidence demonstrates that sow movements are more restricted in farrowing crates than in pens: indeed, farrowing crates were specifically designed to restrict sow movements.</p> <p>L1398-1400 Table 9 (p. 37): Comment: The risk of shoulder lesions is very much related to the body conditions of the sows (Rioja-Lang et al, 2018) and the quality of the flooring. Shoulder lesions is also registered in countries like Sweden (Holmgren & Lundeheim, 2010)) where farrowing and lactating sows are loose housed.</p> <p>Answer: Thank you, the text has been amended accordingly.</p> <p>L1330, L1344-1348 (p. 36): Comment: In addition to the length of the stall itself, the sows use the area over the trough when standing up in terms of width, it's a balance between not being at risk of trying to turn in the stall and having width to stand up unhindered. A Danish study compared the additional space (length and width used by sows in two dimensions of crates or loose when standing up and lying down. The sows shoulder width averaged 40 cm and their length 184 cm. The loose sows used in average (and 75% in brackets) an additional 25 cm (33 cm) in width and 10 cm (20 cm) in length when lying down and 32 cm (67 cm) and 16 cm (28 cm) when standing up. Sows using more space in width were sows sitting and swaying the front part of the body (Moustsen & Duus, 2006).</p>

				<p>L1349-1354 (p. 36): Comment: Denmark has legislation from 1.1.2015, which will be implemented in all herds by 1.1.2035, which states that all sows must be loose from weaning to far-rowing. Current legislation states that pens for loose housed sows must be provided with bedding.</p> <p>Answer: Thank you for the information on the sow stalls, it has been added. However, Member States' national legislations were not subject of this SO (out of the scope of the mandate).</p> <p>Changes to the draft SO based on this comment: minor.</p>
#66	113	3.3.3 Group stress and related ABMs	Svaz chovatelů prasat, z.s., https://www.schpcm.cz/	<p>Row 1414 - 1425: In individual stalls (dry and lactating) group stress is very limited and much lower than in group housing. Table 11: Face injuries are result of natural behaviour (as written). It is no sign of abnormal behaviour and it can't be used as ABM.</p> <p>Answer: Facial injuries are a well-established ABM. While we acknowledge that group stress is lower in stalls than in groups, it is worth noting that it still occurs in individual stalls. Evidence supporting these statements is reported in the SO.</p> <p>Changes to the draft SO based on this comment: none.</p>
#67	19	3.3.3 Group stress and related ABMs	La Coopération Agricole https://www.lacooperationagricole.coop/	<p>Page 38: The title of table 10 should probably refer to group stress and not to movement restriction.</p> <p>Answer: Thank you for this comment, we amended the title accordingly.</p> <p>Changes to the draft SO based on this comment: minor.</p>
#68	45	3.3.3 Group stress and related ABMs	Central Union of Agricultural Producers and Forest Owners MTK https://www.mtk.fi/web/en	<p>Please find the information of this article about sow and litter and the space: Access to chewable materials during lactation affects sow behaviour and interaction with piglets Kirsi-Marja Swan, H. Telkänranta, C. Munsterhjelm, O. Peltoniemi, A. Valros Medicine Applied Animal Behaviour Science 2021</p> <p>Answer: Thank you for the paper; it has been considered relevant and included in the assessment (Chapter 5).</p> <p>Changes to the draft SO based on this comment: minor.</p>

#69	32	3.3.3 Group stress and related ABMs	Respondent requested anonymity	<p>L1426, L1445-1447 (p. 39): Comment: This is in contrast to the findings by Pedersen et al (2011), who also compared sows in tempo-rary crating and sows in traditional farrowing crates; Quote Pedersen et al (2011): The piglets were calmer during nursings in the farrowing pens, which led to a reduction in teat fights, and a decreased number of piglets missing milk letdowns. The sows also terminated less nursing in the farrowing pens and allowed the piglets to perform post-massage for longer. L1426, L1445-1447 (p. 39): Comment: This is in contrast to the findings by Pedersen et al (2011), who also compared sows in tempo-rary crating and sows in traditional farrowing crates; Quote Pedersen et al (2011): The piglets were calmer during nursings in the farrowing pens, which led to a reduction in teat fights, and a decreased number of piglets missing milk letdowns. The sows also terminated less nursing in the farrowing pens and allowed the piglets to perform post-massage for longer.</p> <p>Answer: Thank you for this comment, the text has been amended accordingly.</p> <p>Changes to the draft SO based on this comment: minor.</p>
#70	5	3.3.3 Group stress and related ABMs	Albert Vidal (Submission on Personal Capacity)	<p>Belly nosing... it is too simple approach. If there is no stress there might not be... weaning a pig, leaving a baby in the kindergarden..... stress is always there. Blaming stress for behaviour problem is righth but to easy. May be we should not talk about behaviour problems, but different animal reactions. Certain amount of abnormal behavior it is normal, it has to be, we are not going to change the whole kindergarden system because several kids still are licking their thumb when they are 6 year old</p> <p>Answer: Belly nosing is an abnormal behaviour and therefore is indicative of welfare issues. Evidence supporting this statement is reported in the SO.</p> <p>Changes to the draft SO based on this comment: none.</p>
#71	114	3.3.6 Inability to perform exploratory or foraging behaviour and related ABMs	Svaz chovatelů prasat, z.s., https://www.schpcm.cz/	<p>Row 1616 - 1620: Restriction of feed does not mean that sows suffer by prolonged hunger. Volume of feeding consumed in ad-libitum system can?t be supposed as an ideal. Sows tend to eat too much and as consequence of it they have lot of different disorders. Restriction is necessary to maintain health and welfare of animals. Feeding is limited at level which fits to every sow. Feeding rations are ajusted according body condition of sows.</p> <p>Answer: We accept that obesity could be a problem if sows are fed <i>ad-libitum</i>. Yet at the same time, there is strong evidence that current restricted feeding practices cause prolonged hunger leading to behavioural abnormalities.</p> <p>Changes to the draft SO based on this comment: none.</p>

#72	46	3.3.6 Inability to perform exploratory or foraging behaviour and related ABMs	Central Union of Agricultural Producers and Forest Owners MTK https://www.mtk.fi/web/en	<p>Please find the information of this article about sow and litter and the space: Access to chewable materials during lactation affects sow behaviour and interaction with piglets Kirsi-Marja Swan, H. Telkänranta, C. Munsterhjelm, O. Peltoniemi, A. Valros Medicine Applied Animal Behaviour Science 2021</p> <p>Answer: See answer to comment #68.</p> <p>Changes to the draft SO based on this comment: none.</p>
#73	33	3.3.6 Inability to perform exploratory or foraging behaviour and related ABMs	Respondent requested anonymity	<p>File attached with comments</p> <p>The stand-alone documents attached to the comment are in Appendix C, where relevant answers can be retrieved</p>
#74	6	3.3.6 Inability to perform exploratory or foraging behaviour and related ABMs	Albert Vidal (Submission on Personal Capacity)	<p>Ear b</p> <p>Answer: The comment is not completed.</p> <p>Changes to the draft SO based on this comment: none.</p>
#75	115	3.3.7 Inability to express maternal behaviour and related ABMs	Svaz chovatelů prasat, z.s., https://www.schpcm.cz/	<p>Table 16: - NNN: However in rows 1749-1757 it is stated that there is no difference between natural, seminatural and domestic pig in NNNs, it is ed as ABM. It is not clear what does mean ?Increased number?, because range vary from 5 to 30%. - Piglet mortality: We completely disagree that ?death is not welfare problem?! Mainly in case of crushing, but also in many other situations, is death absolutely extreme consequence of violation of welfare and must be assumed as a welfare problem.</p> <p>Answer: Thank you for the comment. EFSA agrees that the high variability and difficulty in measuring this ABM makes it a poor indicator and this was taken into consideration in the qualitative assessment of the ABM (not sensitive nor specific ABM).</p> <p>Changes to the draft SO based on this comment: minor.</p>
#76	35	3.3.8 Inability to perform sucking behaviour and related ABMs	Respondent requested anonymity	<p>L1781, L1789-1791 (p. 50): Comment: Pedersen et al, 2011 can be added. They found that ?the duration of the previous post-massage did not affect the duration of the milk letdown?</p> <p>Answer: Thank you for the paper; it has been considered relevant and included in the assessment.</p>

				Changes to the draft SO based on this comment: minor.
#77	116	3.3.9 Prolonged hunger and related ABMs	Svaz chovatelů prasat, z.s., https://www.schpcm.cz/	<p>Row 1809-1866: Prolonged hunger is not connected with any housing system. It is problem of herd management. Explained in remark to point 3.3.6.</p> <p>Answer: Prolonged hunger is not system-specific, however in some animal categories and housing systems, the prevalence of this welfare consequence is very high. This has been documented in the SO.</p> <p>Changes to the draft SO based on this comment: none.</p>
#78	36	3.3.9 Prolonged hunger and related ABMs	Respondent requested anonymity	<p>L1821, L1829-1835 (p. 51-52): Comment: the argumentation about bigger litters and nursing sows are related to hunger, is not sufficiently supported ? ?suggest?, ?would support?</p> <p>Answer: Thank you for the comment, the text has been changed accordingly. Further information is reported in Chapter 5.</p> <p>L1839-1843 (p. 52): Comment: to accommodate the sows motivation for eating, legislation has been implemented in Denmark, to make sure that the gestating sows and gilts have access to a sufficient amount of straw, filling feed or feed with a high amount of fiber, to give a feeling of satiation and to fulfill their motivation to chew.</p> <p>L1864-1867 Table 19 (p. 52-53): Comment: In Denmark, teeth clipping is prohibited. Only grinding of corner teeth is allowed and only if documentation for the need to do so</p> <p>Comment: Missing documentation about ?body condition? in all cases/always is correlated to the sows nutri-ent supply and hunger. Hunger is hard to document. Use of the word ?hunger? is problematic because often it is the sows motivation to eat (chewing with nothing to chew on) that is being measured. The motivation to eat is often dependent on outer factors which is discussed in D?Eath et al. 2018.</p> <p>Answer: Thank you for the information. However, Member States' national legislations were not subject of this SO (out of the scope of the mandate).</p> <p>L1860 (p. 52): Comment; In table 18 the pig category is weaners, but in L1860 the headline says "Relevance for Boars"</p> <p>Answer: Thank you for the comment, the text has been changed accordingly.</p> <p>Changes to the draft SO based on this comment: minor.</p>

#79	7	3.3.9 Prolonged hunger and related ABMs	Albert Vidal (Submission on Personal Capacity)	<p>Dry sows and gilts they are not hunger, they are on diet. They get use to eat a daily diet. In fact when they have ad lib acces to pellet straw they only intake 1 kg per week.</p> <p>Answer: The presence of prolonged hunger in dry sows and gilts fed with conventional diets is well documented, and the prevalence of this welfare consequence is high. Evidence on this issue is reported in the SO.</p> <p>Changes to the draft SO based on this comment: none.</p>
#80	24	4. References	MSD Animal Health https://www.msd-animal-health.com/	<p>The EFSA opinion already addresses environmental aspects for good animal welfare. However, it would be good to see a clear and objective definition about good environmental conditions that take into account also gases like ammonia and carbon dioxide. For this, we suggest a few more scientific publications: - Ammonia, Methane, and Carbon Dioxide Concentrations and Emissions of a Hoop Grower-Finisher Swine Barn: https://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=1083&context=abe_eng_pubs - A study of the relationship between airborne contaminants and environmental factors in Dutch swine confinement buildings: https://pubmed.ncbi.nlm.nih.gov/3630921/ - Safety in Swine Production Systems: https://swine.extension.org/safety-in-swine-production-systems/</p> <p>Answer: Thank you for the comment. Air quality in weaners and rearing pigs has been assessed in Chapter 7.</p> <p>Changes to the draft SO based on this comment: none.</p>
#81	21	Abstract of the Public Consultation	Respondent requested anonymity	<p>Please find attached a file with general comments</p> <p>The stand-alone documents attached to the comment are in Appendix C, where relevant answers can be retrieved.</p>
#82	16	Abstract of the Public Consultation	La Coopération Agricole https://www.lacooperationagricole.coop/	<p>The French agricultural professional organisations (Chambre régionale d'agriculture de Bretagne, La Coopération Agricole and its network, Fédération nationale porcine, IFIP - Institut du porc, Inaporc and OS Porc Bretagne) thank EFSA for this opportunity to provide feedback on the report in the framework of its mandate on the protection of pigs on farm. In general, our professional organisations welcome this consultation and express their interest in being consulted in the ing of future recommendations. However, our organisations would like to point out the difficulty of mobilising expertise on this complex document in what we believe a relatively short period of time, especially including the holiday month of August.</p> <p>Answer: Thank you for your interest, recognising these limitations we extended the deadline of the public consultation by two weeks to allow additional stakeholders to comment.</p>

				<p>Changes to the draft SO based on this comment: none.</p>
#83	117	Abstract of the Public Consultation	UECBV (European Livestock and Meat Trades Union) http://www.uecbv.eu/	<p>UECBV welcomes the public consultation on the request for a Scientific Opinion on the protection of pigs on farm. A comprehensive revision of the scientific evidence that has been produced after the enforcement of the current legislation is needed to align the rules to the new knowledge in order to improve the animal welfare standards, to meet the goals of the Farm to Fork Strategy and consumers' expectations, while providing farmers with the necessary tools and support to perform these improvements without jeopardising the economic viability of their farms. Please find attached UECBV position document.</p> <p>The stand-alone document attached to the comment is in Appendix C.</p> <p>Answer: Thank you your inputs. However, economic and social considerations are not in the EFSA remit.</p> <p>Changes to the draft SO based on this comment: none.</p>
#84	106	Abstract of the for Public Consultation	VIER PFOTEN Stiftung für Tierschutz https://www.four-paws.org/	<p>FOUR PAWS thankfully takes the opportunity to comment within the framework of the Public Consultation on the request for a Scientific Opinion on the protection of pigs on farm. FOUR PAWS has selected three areas as examples of the problems arising as consequences of intensive pig farming and suggestions were made for their elimination: a) the restriction of movement and natural behaviour using the example of single sow crates, and the practice of mutilations, such as b) castration without anaesthesia and analgesia and c) tail docking. I would like to ask you to consider the explanations in the attached document.</p> <p>The stand-alone document attached to the comment is in Appendix C.</p> <p>Answer: Thank you your inputs. The information provided has been included in the SO when considered relevant to the assessment.</p> <p>Changes to the draft SO based on this comment: minor.</p>

Appendix C- Attachments to the submitted comments

UECBV COMMENTS

Answer: See answer in Appendix B - comments #1,#9, #83.



Brussels, 13th October 2021
UECBV Ref: CC - 23309

EFSA Mandate on the protection of pigs on farm

UECBV Position

Public consultation on the request for a scientific opinion on the protection of pigs on farm.

Introduction

UECBV welcomes the public consultation on the request for a scientific opinion on the protection of pigs on farm.

A comprehensive revision of the scientific evidence that has been produced after the enforcement of the current legislation is needed to align the rules to the new knowledge in order to improve the animal welfare standards, to meet the goals of the Farm to Fork Strategy and consumers' expectations, while providing farmers with the necessary tools and support to perform these improvements without jeopardising the economic viability of their farms.

Tail biting is one of the main concerns for farmers but also for the industry. In addition, the next steps of the European Citizen's Initiative, "The end of the cage age", are closely followed by stakeholders, as the proposal for a Regulation might have a huge impact on farming. In this context, an appropriate definition of "cage" is needed after a deep reflection and debate.

The consultation document addresses a part of the first set of ToRs and contains sections that describe the pig categories, pig husbandry systems, the welfare consequences that are considered as the most relevant for pigs, and the related animal-based measures relevant to assess pig welfare.

These descriptions are of high quality: the explanations are clear and allow a good understanding of the situations and data presented.

The tables « Pig categories and husbandry systems as a most relevant welfare consequence » and « ABMs - definition, interpretation, qualitative assessment of their sensitivity and specificity » for the 16 welfare consequences are particularly interesting.

UECBV will also be interested in subsequent work, where EFSA will identify the hazards leading to the welfare consequences and provide recommendations to prevent the hazards or correct/mitigate the welfare consequences. EFSA will therefore provide recommendations based solely on animal welfare in accordance with the mandate received.

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Working conditions of farmers and biosecurity (prevention of the spread of animal diseases) will not be taken into consideration. These issues will nevertheless have to be taken into account for any modification of the animal welfare Regulation.

Specific remarks

1.1.1 Background

157-159 The «cage» concept is not defined by the Regulations. The draft opinion gives some answers, but a clear definition of these notions is essential in the interest of collective discussions. Then a deep discussion among all stakeholders is needed before setting any definition of “cage”.

1.2.2 Specific Scenarios

On the list of relevant exposure variables provided in the interpretation of the ToRs of this document (Section 1.2.2), please note the following remark:

Concerning the specific scenario No 5:

335-337: *Specific scenario 5 focuses on the ABMs assessed in pig slaughterhouses to monitor the level of welfare on farm. The ABMs currently used will be reported and information on the scoring methodology, their ease of use and their relevance will be provided. This SpSc considers cull sows and slaughter pigs.*

Table 2: *Specific scenario No 5 = Assessment of ABMs collected in slaughterhouses to monitor the level of welfare on pig farms (e.g. tail damage, stomach ulcers, lung lesions). Additional identified by the WG: pericarditis, skin lesions, bruises, liver lesions, etc.).*

The monitoring of pig welfare at farm is legitimate and should be implemented at this level. Indeed, the implementation of this monitoring at the slaughterhouse level is not appropriate.

In any case, this monitoring should not be the responsibility of the slaughterhouse. It would be the responsibility of the official authorities who have the mission of ensuring the welfare of the animals on the farm. Given the speed of the slaughter lines, the resources deployed on the slaughter line by the official authorities should be significant so as not to penalise the competitiveness of the companies. Resources should also be allocated to the management of the system, to the centralisation of data, to their analysis and to the feedback to the farmer.

Moreover, the control at the slaughterhouse positions the farmer as a spectator and not as an actor responsible for a better conduct of his breeding. Observation and monitoring tools already exist for farmers to help them detect problems and quickly implement effective action plans.



To measure progress at the national and European levels, these tools could be generalised, and farmers would report relevant information on the Food Chain Information. These data would then be collected by the official authorities present in the slaughterhouses. The information would be based on verifiable declarations that would be sufficient to establish an overview of the situation and measure its evolution.

Finally, considering indicators based on offal (stomach ulcers, lung lesions, pericarditis, liver lesions) is not realistic given the complexity of implementation.

The **European Livestock and Meat Trades Union (UECBV)**, founded in 1952, is the EU voice of national federations representing livestock markets, livestock traders (cattle, horses, sheep, pigs), meat traders (beef, horsemeat, sheep meat, pig meat), and meat industry (slaughterhouses, cutting plants and meat preparation plants).

Brought together within the UECBV are:

- an international association i.e. the **European Association of Livestock Markets (AEMB)**;
- a **Young European Meat Committee (YEMCo)**;
- the **European Natural Sausage Casings Association (ENSCA)**;
- the **Organisation of European Shippers (OCEAN)**;
- fifty-two national or regional federations in twenty-four of the twenty-seven Member States of the European Union, as well as Japan, Norway, Russia, Switzerland, Ukraine and the United Kingdom.

In total, some 20,000 firms of all sizes and 230,000 jobs are represented within the UECBV through its national member federations.

EUROGROUP FOR ANIMALS

Answer: See answer in Appendix B - comment #8

1- Including positive welfare impacts. The document states (lines 223 to 226) “The risk assessment, with identification of the negative welfare consequences (adverse effects) that occur to an animal in response to a factor, and the benefit assessment, with identification of positive welfare consequences; however, in the current document EFSA addressed the EC mandate by focusing on the adverse effects only. In the context of this opinion the adverse effects are called ‘welfare consequences’”. As demonstrated by research, especially for higher welfare systems, a lot of its impact is demonstrable with the positive impact on animal welfare¹. This could also mitigate the risk of no animal base measurements being available for the different welfare consequences and decrease the need for resourcing to resourced-based indicators. We recommend that positive impact is also integrated within the analysis.

¹ Friedrich, Lena, Joachim Krieter, Nicole Kemper, and Irena Czycholl. "Iceberg indicators for sow and piglet welfare." *Sustainability* 12, no. 21 (2020): 8967.

Answer: Please see answer in Appendix B - comment #8

Equine chorionic gonadotropin (formerly known as PMSG) is commonly used to increase reproductive performance of sows through synchronizing cycles and increasing the number of piglets produced per year. The process of eCG production from the blood of pregnant mares raises serious animal health and welfare concerns¹. eCG production in South America is particularly problematic and NGOs have repeatedly documented severe mistreatment during blood collections reaching 10 liters per week². The animals are kept in poor conditions and suffer due to the lack of appropriate veterinary care³.

Intra-EU production of eCG poses similar welfare risks - in Germany mares are subject to blood collections of up to 16 liters per week. Depending on a mare's body weight and blood volume, no more than approx. 4,5 liters⁴ should be extracted at a time, however, such collections cannot take place more often than once per 2 weeks. The amount of blood collected in all countries where eCG is produced significantly exceeds these recommendations. Existing welfare recommendations⁵ are not followed. We recommend that the above mentioned information be taken into account within the analysis.

¹ Manteca Vilanova, X., De Briyne, N., Beaver, B., & Turner, P. V. (2019). Horse Welfare During Equine Chorionic Gonadotropin (eCG) Production. *Animals : an open access journal from MDPI*, 9(12), 1053. <https://doi.org/10.3390/ani9121053>

² <https://www.tierschutzbund-zuerich.ch/en/service/dossier/production-of-pmsg-in-south-america>

³ <https://www.animal-welfare-foundation.org/en/blog/argentina-province-of-buenos-aires-blood-farm-syn-tex-sa-blood-extraction-2>

⁴ <https://www.nc3rs.org.uk/blood-sample-volumes>

⁵ Manteca Vilanova, X.; Beaver, B.; Uldahl, M.; Turner, P.V. Recommendations for Ensuring Good Welfare of Horses Used for Industrial Blood, Serum, or Urine Production. *Animals* **2021**, *11*, 1466. <https://doi.org/10.3390/ani11051466>

Answer: Please see answer in Appendix B - comment #10

Limited approach to system features for gilts, dry sows and farrowing sows (lines 314 to 324). In both specific scenarios there was a very limited approach to the exposure variables ('grouping time' for gilts and dry sows and 'space allowance, nesting/enrichment material and the period that the gilt/sow is confined in a crate for farrowing females'). According to research, the differences of animal welfare impact between systems in both production phases are greatly influenced by other important exposure variables, such as design features of the systems and management (e.g. group housing- a specialised mixing pen with additional space per sow to allow subordinate sows to escape more aggressive sows, gradual familiarisation of sows via fence line contact, flexible barriers or large straw bales to escape behind, feed ad libitum for the mixing duration until sows have settled their social order; Farrowing: Sloping walls: These provide the sow with support which allows her to lie down more slowly and carefully and are preferred over farrowing rails. Piglets can lie in the area between the sloping and vertical wall which protects them from the sow and should be available at all pen walls). In light of this evidence, the scope of exposure variables should be broadened to include this evidence.

Answer: See answers in Appendix B - comments #33; #35

Systems with temporary crating were only described but not included in the more detailed analysis. These systems will probably be the next step to be discussed under the European Commission legislative steps towards the ban on cages for pigs. These systems bear animal welfare consequences that differ from the individual pen systems without temporary crating options, so they need to be analysed separately. From the different design (e.g. smaller space allowance) to the management practices and the risk of sow's frustration on the first days due to the confinement should be taken into consideration, regarding the Animal Based measurements selected. Co-legislators will need this information when deciding what systems will be allowed and considered cage-free as well as what recommendations for better management to provide (e.g. duration of days in confinement allowed before and after farrowing).

It is important to note that pens which are designed for temporary crating of the sow during farrowing and for a few days afterwards, often do not have the appropriate design (quantity and quality of space) to function well as a true free-farrowing pen. As such, temporary crating pens that are used 'open' are more likely to yield poor results than a pen that is principally designed to be used without confinement^{1,2}. Temporary crating pens also lack the other design features of true free-farrowing pens which optimise maternal behaviour and maximise performance^{3,4}.

¹ Baxter, E. 2021. Optimising sow and piglet welfare during farrowing and lactation. In: Edwards, S. ed. Understanding the behaviour and improving the welfare of pigs. Cambridge: Burleigh Dodds Science Publishing. In Press. Available from: <https://shop.bdspublishing.com/store/bds/detail/workgroup/3-190-89133> Publication date 26 Jan 2021.

² Report of the Loose Lactating Sows Workshop 2018. Discussion in: Austria restricts crating of sows in farrowing pens to the 'critical period' of piglets life – Johannes Baumgartner, pp 306-7. Available from: https://www.freefarrowing.org/downloads/file/49/lis18_proceedings

³ Baxter, E.M., Lawrence, A.B. and Edwards, S.A., 2011. Alternative farrowing systems: design criteria for farrowing systems based on the biological needs of sows and piglets. *Animal*, 5(4), p.580. 220

⁴ Baxter, E.M., Andersen, I.L. and Edwards, S.A., 2018. Sow welfare in the farrowing crate and alternatives. In *Advances in Pig Welfare* (pp. 27-72). Woodhead Publishing

COMPASSION IN WORLD FARMING

Answer: See answer in Appendix B - comment #11

Scenario 2.

We consider that type of flooring is a relevant exposure variable as this will affect lying comfort, as well as risk of skin lesions, and the type of flooring that is provided is often different between the different types of farrowing accommodation.

We consider that litter size is a relevant exposure variable as this is a variable to which the sow is exposed and which impacts on sow welfare eg in terms of farrowing duration, rate of stillbirths... This is also highly relevant to the success of, or not, (and therefore welfare experienced in) different farrowing systems with different degrees of behavioural freedom. Indeed, litter size is shown to be the single biggest determinant of piglet mortality and the biggest hurdle to success in free farrowing systems. Hence, it is crucial that it is considered as part of the review of pig welfare, in relation to the ECI.

Ability to perform natural rooting behaviour is also an exposure variable which sows are subjected to and impacts their welfare, and this will obviously vary between indoor systems and those with outdoor access. It is worthy of consideration separately to exploratory behaviour, given that rooting forms the largest part of pigs' exploratory behaviour. The ability to perform this should be considered as a welfare exposure variable for all categories of pigs.

Scenario 3

The above 2 points are also relevant to scenario 3 in relation to the sow. However both are also relevant for the piglets. Litter size is a variable to which piglets are exposed and in particular has many impacts on piglet welfare, interacting with the type of farrowing accommodation provided and piglet welfare within it.

Genetics of the sow impacts on her welfare and that of the piglets.

Stockmanship is an important factor that impacts on welfare of sow and piglets during this time, and that is crucial for free farrowing systems particularly as the farmer must be able to read sow behaviour and have good skills in careful handling / mannerisms in order to avoid stressing the sow.

Scenario 4

In addition to those provided, all of which we agree are relevant, we would also suggest that stockmanship, temperature and ability to control their temperature (eg by moving to cooler areas), and space at feeding time and feeding strategy to ensure all can access at once are important exposure variables that are relevant for tail docking.

Under type of flooring, this can also interact with air quality, and fully slatted means that pigs always have to lie directly over the fumes from their waste below.

Answer: Thank you for the comment. The risk factors to be assessed under Specific ToR 4 are listed in the mandate and are discussed in Chapter 7.

Changes to the draft SO based on this comment: none.

Scenario 5

Under tail damage it should also be recorded whether tail intact or docked. An intact tail with no evidence of tail biting is an indicator of good welfare, and harder to achieve than a docked tail with no biting. Position of skin lesions is important – eg shoulder sores in sows, injuries to teats, injuries to piglets faces. All can be an indicator of poor welfare, and provide information to enable further investigation.

Foot damage as an indicator of foot health.

Answer: Thank you, these ABMs are discussed in details in the SO.

Changes to the draft SO based on this comment: none.

Answer: See answer in Appendix B - comment #43

3.2.3 Farrowing and lactation systems

It is important that welfare of both sows and piglets is also considered in temporary farrowing crates. It is not clear whether these will be included within the category of 'individual farrowing crates'? Temporary crates are still a farrowing crate, but one that is (potentially) later opened up to allow the sow movement during part of her lactation.

We are very concerned that temporary crates should not be seen as a 'cage-free' solution, nor a half-way step. They present many of the same welfare consequences for the sow (inability to nest build, severe restriction of movement, inability to perform maternal behaviour, lying comfort, enrichment provision, flooring suitability, ability to defecate away from lying area, etc etc). Furthermore, most temporary crate systems are not designed to function well (with low piglet mortality) when the sow is free throughout farrowing and lactation. Therefore, farmers using these systems will invariably keep the sows confined during farrowing. Furthermore, it is a very real risk that sows will be left crated for longer than the stipulated number of days, this is because there can often be a rise in mortality, and / or workload becomes higher once sows are free in these systems. It will not realistically be possible to reliably monitor or control when sows are released.

Hence, the installation of temporary crates would be a very costly investment and change of system, but without achieving the goal of a cage-free environment for the sow. Furthermore, the systems, once installed, will not be changed for many years. As such, we see temporary crates as a great delay to achieving free farrowing for sows and thus a great delay to achieving acceptable welfare for sows. Free farrowing requires a designed zero confinement free farrowing pen from the outset.

Condous, P.C., Plush, K.J., Tilbrook, A.J. and Van Wettere, W.H.E.J., 2016. Reducing sow confinement during farrowing and in early lactation increases piglet mortality. *Journal of animal science*, 94(7), pp.3022-3029.

Lohmeier, R.Y., Grimberg-Henrici, C.G.E., Büttner, K., Burfeind, O. and Krieter, J., 2020. Farrowing pens used with and without short-term fixation impact on reproductive traits of sows. *Livestock Science*, 231, p.103889.

Heidinger, B., Stinglmayr, J. and Baumgartner, J., Pro-SAU: Ausgewählte Ergebnisse zu den neuartigen Bewegungsbuchten in der Abferkelung. Pro-SAU: Selected results on the new moving bays in farrowing. https://raumberg-gumpenstein.at/jdownloads/FODOK/2018/fodok_3_20260_heidinger_ntschgt18_final.pdf

Moustsen, V.A., Hales, J., Lahrmann, H.P., Weber, P.M. and Hansen, C.F., 2013. Confinement of lactating sows in crates for 4 days after farrowing reduces piglet mortality. *Animal*, 7(4), pp.648-654.

Hales, J., Moustsen, V.A., Nielsen, M.B. and Hansen, C.F., 2014. Higher preweaning mortality in free farrowing pens compared with farrowing crates in three commercial pig farms. *Animal*, 8(1), pp.113-120.

King, R.L., Baxter, E.M., Matheson, S.M. and Edwards, S.A., 2019. Temporary crate opening procedure affects immediate post-opening piglet mortality and sow behaviour. *animal*, 13(1), pp.189-197.

Respondent request anonymity

Reference comment in Appendix B: comment #53

3.3.1 Restriction of movement and related ABMs

L1239, L1246-1249 (p. 32):

Comment: We acknowledge there was a statistical difference in Hales et al (2016), however, the level of activity was very low with a difference between confined and loose sows of 0.4 number of postural changes in two-hour interval. Quote Hales et al (2016): Sows in LL had a higher frequency of lying down than sows in LC and CC (LL: 0.9 ± 0.12 events/interval, LC and CC: 0.5 ± 0.12 events/interval; $P \leq 0.03$) and a higher frequency of getting up (LL: 0.7 ± 0.10) events/interval, LC and CC: 0.3 ± 0.10 events/interval; $P \leq 0.03$

Answer: Thank you for these considerations. EFSA experts have revised the relevant publications and agreed that no changes were needed to the text.

Changes to the draft SO based on this comment: none.

L1250-1256 (p. 32-33):

Comment: Bonde et al (2004) and Diaz et al (2015) did not compare with non-confined sows. Diaz et al observed video-recording of 13 sows with overgrown claws and 11 sows without overgrown claws. Not a large dataset to use for 9 millions sows in Europe.....

In both Bonde et al (2004) and Diaz et al (2015), a main cause for difficulties in lying down is overgrown claws, which is a management related issue and not caused by housing in farrowing crates.

Answer: Thank you for these considerations. EFSA experts have revised the relevant publications and agreed that no changes were needed to the text.

Changes to the draft SO based on this comment: none.

L1261, L1272, L1282-1286 (p. 33):

Comment: "There was also no effect of increasing space allowance on pen hygiene in either the solid-floored lying area or the activity area in the middle of the pens. The percentage of pens with faecal soiling all over the lying area or the number of pens in need of daily cleaning, was not affected by increasing the space allowance from 0.67 m²/pig to either 0.73 m²/pig, or 0.79 m²/pig. Pen hygiene deteriorated as pigs aged, since soiling on the solid floor and wallowing behaviour was most prevalent in the late growing period" (Jen-sen et al, 2012)

Answer: Thank you for the comment. The topic of this comment is discussed in Chapter 7.

Changes to the draft SO based on this comment: none.

L1305-1308 Table 7 (p. 33-34):

Comment: Or if movement is not restricted, there may still be no posture changes due to normal behaviour of resting.

Comment: pigs may choose to lie in sternal position due to low temperature as well.

Comment: The risk of shoulder lesions is very much related to the body conditions of the sows (Rioja-Lang et al, 2018) and the quality of the flooring. Shoulder lesions is also registered in countries like Sweden (Holmgren & Lundeheim, 2010)) where farrowing and lactating sows are loose housed.

Answer: Thank you for the comment. The topic of this comment is discussed in Chapters 5 and 9.

Changes to the draft SO based on this comment: none.

L1211, L1219-1220 (p. 32):

Comment: To increase sows' activity, it has been good practice for many years to feed lactating sows two-five times a day, and to ensure the crate is adjusted to make room for the sow to unhindered stand up and lie down (Kaiser & Pedersen, 2014).

Answer: Thank you for the comment. The topic of this comment is discussed in Chapter 5.

Changes to the draft SO based on this comment: none.

L1222-1225 (p. 32):

Comment: To satisfy the sows motivation for eating, there has been implemented legislation in Denmark, making sure that gestating sows and gilts have access to a sufficient amount of straw, filling feed or feed with a high fiber content, in order to provide a feeling of satiation and fulfill their motivation to chew.

Denmark has legislation from 1.1.2015, which will be implemented in all herds by 1.1.2035, which states that all sows must be loose from weaning to farrowing.

Answer: Thank you for the comment. The topic of this comment is discussed in Chapter 4.

Changes to the draft SO based on this comment: none.

L1226-1229 (p. 32):

Comment: sources have been sent describing that sows lower in the hierarchy are exposed to stress and injuries when put in loose housing systems, when sows mount each other. Furthermore, sows in groups probably won't go into heat at the same time, and therefore, sows in heat will mount sows that are not in heat yet.

Rault, J.-L., Morrison, R.S., Hansen, C. F., Hansen, L.U., Hemsworth, P. H. (2014): "Effects of group housing after weaning on sow welfare and sexual behavior. Journal of Animal Science 92: 5683-5692.

Although less frequent, mounting is a potentially injurious behavior. Sows that were the target of these sexual behaviors showed no reaction in about half of the interactions. They rarely adopted a standing posture, which suggests that the initiator was the sow in estrus, not the recipient. In conclusion, sows housed in groups at weaning and regrouped after insemination experienced higher stress than sows housed in individual stalls at weaning and mixed in groups after insemination”

Pedersen, L. J. (2007): “Sexual behaviour in female pigs. *Hormones and Behaviour* 52: 64-69.

Interactions with other females in oestrus also play a role in synchronisation of oestrus within groups. However, social subordination and fear of humans have been shown to inhibit both receptive behavior during mating and female–female mounting activity. The influence of social stress and fear of humans seems to be mediated largely via specific fear reactions towards humans and larger dominant individuals rather than via a general inhibition of sexual motivation through inhibition of the hypothalamus–pituitary–gonadal axis. A gradual increase in mounting, nosing and standing close to the boar pen was seen from 2–3 days before standing oestrus (Fig. 1). For several days, some sows were observed to mount other sows more than 40 times per 24-h period. The sow performing the mounting was always in pro-oestrus or in oestrus. Thus, dominant sows can be a source of stress for lower ranking animals in a group. If a mounted sow is in the phase of implantation (approximately 10 days after mating), she may either return to oestrus or have a reduced litter size. The courting behavior of boars is also facilitated by social stimuli from other boars. However, when sows are kept under conditions where the social pressure is high, e.g. due to limited space and/or resources, the social stress experienced by particularly the subordinate individuals may inhibit sexual motivation during oestrus.”

Comment: Denmark has legislation from 1.1.2015, which will be implemented in all herds by 1.1.2035, which states that all sows must be loose from weaning to farrowing.

Answer: Thank you for your comment. The text of the SO has been edited accordingly.

Changes to the draft SO based on this comment: minor.

Respondent request anonymity

Reference comment in in Appendix B: comment #73

3.3.6 Inability to perform exploratory or foraging behaviour and related ABMs:

L1616, L1635-1640 (p. 45):

Comment: to accommodate the sows motivation for eating, there is legislation in Denmark, to make sure that gestating sows and gilts have access to a sufficient amount of straw, filling feed or feed with a high amount of fiber to give a feeling of satiation and to fulfill their motivation to chew.

Comment: regulation of satiation is controlled physically (distended abdomen) or metabolically (nutrients), and that has to be included in the report.

Jensen M.B., L.J. Pedersen, P.K. Theil, C.C. Yde and K.E.B. Knudsen. (2012): Feeding motivation and plasma metabolites in pregnant sows fed diets rich in dietary fiber either once or twice daily. Journal of Ani-mal Science, 90:1910-1919.

Yde C.C., H.C. Bertram, P.K. Theil, K.E.B. Knudsen. (2011): Effects of high dietary fibre diets formulated from vegetable and agricultural industries on plasma metobolites in gestating sows. Archives of Animal Nutri-tion. Vol 65, No. 6: 460-476.

Tauson, A. H. (2012): Feed intake and energy supply – growing pigs. In: Nutritional Physiology of Pigs.

Answer: Thank you for your comment, it has been taken into consideration in revision of the text of the SO. However, Member States' national legislations were not subject of this SO (out of the scope of the mandate).

Changes to the draft SO based on this comment: minor.

L1664, L1669 -1671 (p. 46):

Comment; Undesirable behaviors are also present in enriched environments.

See for example Zonderland et al 2008, they also observed tail biting in pens with straw, but at a lower level compared to pens with less attractive object. See also Wallgren, T. and S. Gunnarsson (2021). "Effect of Straw Provision in Racks on Tail Lesions, Straw Availability, and Pen Hygiene in Finishing Pigs." Animals 11(2): 379. observing tail lesions in systems with straw in a rack or straw on the floor

Answer: Thank you for your comment, it has been taken into consideration in revision of the text of the SO.

Changes to the draft SO based on this comment: minor.

L1676 (p. 46):

Comment: A definition of “basic enrichment” is needed to understand the context.

Answer: Thank you for your comment, it has been taken into consideration in revision of the text of the SO.

Changes to the draft SO based on this comment: minor.

L1678, L1680 (p. 46):

Comment; It is stated that inadequate exploratory outlets leads to a persistent nosing, manipulation and chewing of penmates. Please define persistent, as several studies have shown that the level of behaviour directed towards penmates is much lower than behaviour directed towards pen equipment and other elements in the pens

See for instance

Oxholm, L. C., et al. (2014). "Behaviour of liquid-fed growing pigs provided with straw in various amounts and frequencies." *Animal* 8(11): 1889-1897.

Amdi, C., et al. (2015). "Pen-mate directed behaviour in ad libitum fed pigs given different quantities and frequencies of straw." *Livestock Science* 171: 44-51.

Answer: Thank you for your comment, it has been taken into consideration in revision of the text of the SO.

Changes to the draft SO based on this comment: minor.

L1683 (p. 46):

Comment: Tail lesions are not always linked with reduced growth. It depends on the severity of the injury. See Hakansson and Houe 2020 finding that pigs with the highest weight gain had the highest risk of getting a tail damage.

Hakansson, F. and H. Houe (2020). "Risk factors associated with tail damage in conventional non-docked pigs throughout the lactation and rearing period." *Preventive Veterinary Medicine* 184: 105160.

Answer: Thank you for the comment; no modifications to the SO were considered needed.

Changes to the draft SO based on this comment: none.

L1699-1702 Table 15 (p. 46-47):

Pigs also direct oral behaviour such as biting, nosing and licking towards pen fittings in enriched environments.

See for instance

Day, J. E. L., et al. (2008). "The effect of varying lengths of straw bedding on the behaviour of growing pigs." Applied Animal Behaviour Science 109: 249-260.

Sensitivity / specificity:

The ABM is sensitive: inability to perform exploratory or foraging behaviour results in exploration and manipulation of far less appropriate pen fittings.

Comment: ... far less appropriate ... 'The wording 'far less appropriate'.

The sentence should be rephrased: inability to perform exploratory or foraging behaviour results in more exploration and manipulation of pen fittings. 'Far less appropriate' should be deleted as this is a subjective interpretation.

Stereotypic behaviour (gilts, sows, rearing pigs, boars)

Sensitivity / specificity:

The ABM is sensitive: inability to perform exploratory or foraging behaviour

usually results in stereotypic behaviour, especially in gilts and sows.

Comment: ... usually results in stereotypic behaviour.. The wording should be changed to inability to perform exploratory or foraging behaviour may result in stereotypic behaviour, especially in gilts and sows. Stereotypies are also correlated with feeding level (see L 1837) and the interpretation of stereotypies on animal welfare is complex (Mason and Latham 2004). As the interpretation of stereotypic behaviour is only moderate sensitive the ABM can only be moderate sensitive

Mason, GJ, & Latham NR (2004). Can't stop, won't stop: is stereotypy a reliable animal welfare indicator?. Animal Welfare, 13: 57-69

Answer: Thank you for your comment, it has been taken into consideration in revision of the text of the SO.

Changes to the draft SO based on this comment: minor.

Tail lesions (piglets, weaners, finishing pigs)

Sensitivity/ Specificity

The ABM is specific: the ability to perform exploratory or foraging behaviour will

prevent tail biting to a very large extent.

Comment; The wording ...to a very large extent... The ability to perform exploratory or foraging behaviour will only prevent tail biting if lack of enrichment is the factor triggering tail biting.

For example Finnish farmers scored feeding-related issues to be most important prevention of tail biting (Valros et al 2016). Wallgren et al 2021 observed tail lesions in systems with straw.

Valros, A., et al. (2016). "Managing undocked pigs – on-farm prevention of tail biting and attitudes towards tail biting and docking." *Porcine Health Management* 2(1): 1-11.

Wallgren, T. and S. Gunnarsson (2021). "Effect of Straw Provision in Racks on Tail Lesions, Straw Availability, and Pen Hygiene in Finishing Pigs." *Animals* 11(2): 379.

Answer: Thank you for the comment; no modifications to the SO were considered needed.

Changes to the draft SO based on this comment: none.

Respondent requested anonymity

Answer: See answers in Appendix B - comment #81

General comments

The [REDACTED TEXT] thank EFSA for this opportunity to provide feedback on the draft report in the framework of its mandate on the protection of pigs on farm.

In general, our professional organisations welcome this consultation and express their interest in being consulted in the drafting of future recommendations. However, our organisations would like to point out the difficulty of mobilising expertise on this complex document in what we believe a relatively short period of time, especially including the holiday month of August.

On a technical level, our professional organisations would like to raise several questions:

- **Weighting of indicators:** The report lists an exhaustive review of 30 animal welfare consequences, out of which 14 are studied more into detail. It seems essential to us to define a weighting of these 14 factors as some of them can have a greater impact than others on animal welfare.

- **Harmonised measurement method for the indicators:** The report suggests a definition, an interpretation, and an assessment for each indicator. Our organisations stress that the measurement method plays a key role in the sensitivity of the measurement and that these methods will have to be harmonised at European level if comparable results are to be obtained.

- **Diversity of science to be considered:** In order to properly assess animal welfare and in particular to be able to implement sustainable measures, it is essential to take into account considerations related to the welfare of people in contact with animals, both social, economic and environmental. For example, the indicators considered should be linked to the best available environmental techniques. Similarly, it will be essential to carry out an assessment of the economic consequences on farms of future recommendations that may be issued based on this report.

Finally, our professional organisations note a few points that seem to be proofreading errors:

- Page 33, line 296: A percentage should be approximated instead of "X%".
- Page 38: The title of table 10 should probably refer to group stress and not to movement restriction.
- Page 55: The title of Table 21 should probably refer to heat stress and not to the ability to express maternal behaviours.

Answer: Thank you your inputs. The information provided has been included in the SO when considered relevant to the assessment.

Changes to the draft SO based on this comment: minor.

VIER PFOTEN

Answer: See answers in Appendix B - comment # 84

FOUR PAWS thankfully takes the opportunity to comment within the framework of the Public Consultation on the request for a Scientific opinion on the protection of pigs on farm.

Introduction

As an unusual but necessary introduction, the following is noted in advance.

In principle, EFSA evaluates the different aspects of animal husbandry in its scientific opinions on the basis of the relevant legislation. This practice is based on the assumption that, in principle, applicable legal requirements are generally respected or controlled and enforced.

In the present case, unfortunately, there is an enormous discrepancy between this assumption and the realities on the ground. In the following, two topics (mutilation - tail docking and restriction of movement) are addressed in which the legislation is systematically ignored with the knowledge and toleration of the responsible authorities. The following examples concern Germany. However, similar examples could have been described in almost any other Member State.

It is our view that EFSA's opinion should describe illegal practices in so far as they are systematically applied and do not constitute exceptions, and label them as prohibited.

examples:

a) Mutilation – tail docking

Due to routinely tail docking of pigs, Germany and other European countries has been violating current EU law for decades. Member States violate EU law without any consequences being visible. According to the COUNCIL DIRECTIVE 2008/120/EC of 18 December 2008 laying down minimum standards for the protection of pigs, routine tail docking has been prohibited since 1994.

In practice, this looks different: Germany - like most other EU states - has now been violating applicable EU law for decades. A 2018 audit by the Directorate-General for Health and Food Safety ¹showed that 95 percent of pigs in Germany have their tails docked. Recommendations for the Common Agricultural Policy (CAP) in Germany, published by the EU Commission in December 2020², also reiterated that "a lack of enforcement of EU animal welfare legislation is observed". Although tail docking of pigs is banned as a routine measure, it is still common practice in Germany.

¹ DG(SANTE) 2018-6445

² SWD(2020) 373 final

b) Restriction of movement

The situation in German intensive sow keeping is similar to other countries in Europe and best described with confinement and constant lack of movement 10 weeks in a row, about 2.3 times per year, thus resulting in a complete confinement in a body-tight metal cage for about 6 months per year. The sows cannot even turn around their own axis in the crate. Friction against the metal bars often causes pressure and purulent sores. The lack of movement often leads to painfully swollen and inflamed joints, weak muscles and a higher frequency of Mastitis-Metritis-Agalactie-syndrome (MMA), which is a painful inflammation of the uterus and the teats, leading to a milk deficiency (the latter being not only problematic for the sow but also for the piglets). MMA is multifactorial, but one of the main causes is lack of movement before parturition.

With its decision of 24 November 2015, which became known as the "Magdeburg ruling", the Higher Administrative Court of Magdeburg had declared the dimensions of the usual crates to be far too narrow. They have been in breach of the requirements of the relevant AW legislation since 1992 and are therefore illegal. The Federal Administrative Court confirmed the ruling one year later³.

Instead of finally implementing this regulation, the federal government decided to keep the illegal crates for years to come. The legislator has amended the relevant Animal Welfare legislation. In order to make the illegal situation legal, the decisive sentence "that the pigs must be able to stretch out their limbs unhindered in a lateral position" were deleted from the regulation. In this way, a spoken court ruling is simply overruled.

³ <https://www.bverwg.de/de/081116B3B11.16.0>

Substantive opinion

FOUR PAWS has selected three areas as examples of the problems arising as consequences of intensive pig farming and suggestions were made for their elimination: a) the restriction of movement and natural behaviour using the example of single sow crates, and the practice of mutilations, such as b) castration without anaesthesia and analgesia and c) tail docking.

a) the restriction of movement and natural behaviour using the example of single sow crates

Individual crates for sows - gestation and farrowing crates (gestation crates refer to gilts and dry sows, from entering the service area until the end of the fourth week after service and farrowing crates from one week before the expected farrowing time until the end of the suckling period/weaning of the piglets).

FOUR PAWS position: Prohibition of single sow crates

Main problems: Restriction of movement and natural behavior

- Pigs have a strong motivation for foraging, that's ideally taking up most of their time budget in a day. Rooting is one of the most important part of foraging behaviour and not being able to fulfil it, results in different health issues and a bad mental state (e.g. fattening pigs: tail biting, e.g. sow crates: biting at metal bars of enclosures, stereotypic behavior, depressed body postures).
- Appropriate soft flooring – pigs' claws are adapted to soft floor - hard floor surfaces cause feet problems, lameness, and also bursitis, due to being forced to lie on hard, concrete floor.
- *Addition to farrowing crates:*
- A few days before parturition, sows feel a strong urge to build a nest. The confinement in a farrowing crate does not allow the sow to follow fulfil this essential behaviour, leaving her frustrated and stressed as her natural needs are not met.
- Pigs are a social species and must be kept in stable and appropriate groups – group keeping of sows and group farrowing should be a standard procedure. If group farrowing is not possible: temporary individual farrowing in single free farrowing systems for a maximum of ten days) with protective devices (piglet deflectors) to prevent piglets being crushed. After that, group reunification should occur, as it can be otherwise detrimental to the sows health.

Separating sows for too long leads to a loss of the rank order in the group and to new rank fights.

- Before lying down, sows would perform a pre-lying behaviour, intending to move piglets out of danger of being trapped under the sows body. This is not possible due to space restrictions in a farrowing crate. The sows rather let themselves “fall down” instead of actively lying down pushing the muzzle forward on the floor.
- During the first days post-partum, sows would be highly attentive to their piglets, and frequent nose-nose contacts occur between sow and piglets. Due to the restriction in movement, natural maternal behavior is not possible, leading to frustration and stress.
- The totality of the unfulfilment of natural behaviour in this barren environment, single sow crates with no space to move, the absence of roughage, the absence of nesting material, as well as not being able to socially interact with the piglets causes immense stress and severe, unjustifiable suffering.

Farrowing crates were introduced to reduce piglet mortality attributed to overlaying by the sow (Edwards, 2002). However, confined sows show increased piglet-directed aggression (Jarvis et al., 2006), and greater restlessness during farrowing which increases the crushing risk and reduces a safe access to the udder (Ocepek and Andersen, 2017).

Literature

Edwards S. A. (2002). Perinatal mortality in the pig: environmental or physiological solutions? *Livestock Production Science* 78 (1), 3–12.

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b) practice of mutilations - castration without anaesthesia and analgesia

1. Castration (male piglets)

FOUR PAWS position: Prohibition of castration without anaesthesia and analgesia. Surgical castration should only be allowed in a transition period and only under full anaesthesia carried out by a vet. Boar fattening with or without immunocastration should be the preferred and supported option.

In 2010, the 'European Declaration on alternatives to surgical castration of pigs' was agreed. The Declaration stipulates that from January 1, 2012, surgical castration of pigs shall only be performed with prolonged analgesia and/or anaesthesia and from 2018 surgical castration of pigs should be phased out altogether (De Briyne et al. 2016). Since then, this declaration has not been put into practice.

Piglet castration causes several problems: the piglets are castrated at a very early age (within the first week) – and are castrated without anaesthesia, which causes acute and prolonged pain, as well as a lot of stress for the animals (1-week post-operative pain, inflammations take even longer).

The castrations, that are carried out by the farmer to save veterinary costs, also pose an additional danger to the animals: suffering due to a lack of knowledge, rough handling, and often also due to poor hygiene practices.

Alternatives: Nowadays there are three options available that make the suffering of piglets during castration unnecessary and are acceptable from an animal welfare point of view: boar fattening (from an animal welfare point of view the best alternative). If castration is necessary immunocastration may give the greatest benefit to the animals (De Briyne et al., 2016). It has also been shown that vaccination of boars with Improvac allows production of heavy boars with improved meat quality through prevention and control of boar taint. Improvac-treated boars grew more rapidly ($P = 0.051$ and < 0.001 for pigs slaughtered at 23rd and 26 week of age, respectively) than control boars. The vaccine was well tolerated by the pigs, and no observable site reactions could be detected at the time of slaughter (Dunshea et al., 2001).

Surgical castration may only be allowed by the obligatory use of anaesthesia and analgesia and then is an acceptable alternative only in the transition phase until the complete ban of castration is in place.

Literature

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practice of mutilations – tail docking (weaners and rearing pigs)

FOUR PAWS position: Clearly prohibit tail docking without any exceptions. The ignorance for decades of the prohibition of routine tail docking requires acute sanction measures.

From a legal point of view:

Routine tail docking must end and we believe it is not acceptable that almost all Member States infringe current legislation while still performing this illegal practice. The right sanctioning measures are urgently needed to force Member States to comply with current EU-legislation. Otherwise it will continue to not be taken serious which raises a fundamental question of the validity of EU law. Farms need to change their housing systems and adapt it to the needs of the animals, not vice versa. A turn-away of fully slatted floors and a shift to animal welfare friendly housing is called for.

From a scientific point of view:

Tail biting is multifactorial and an indicator revealing inadequate housing and/or management conditions. Tail biting indicates stress of the pig, it is often caused by a combination of inadequate environmental conditions and bad management.

The main factors are:

- Lack of environmental enrichment to fulfill the needs for rooting, chewing, sniffing -> if these needs are not fulfilled the pigs get stressed and frustrated
- Inadequate pen structure: there should be different areas for different behavior -> if this is not guaranteed, it leads to stress as pigs clearly separate their dunging from their lying area.
- Inadequate diet: adequate quality and quantity of feed and water is essential, e.g. roughage ad libitum-> if certain criterions are not met it leads to boredom or competition over resources
- competition over resources: pigs are social animals, prefer to forage, eat or rest simultaneously (-> enough space for each pig is essential) -> if not there is competition over resources leading to stress and fights
- air quality: pigs need to choose between different climatic conditions, so best is to have an outdoor run and a stable. In the stable the temperature should provide the pigs to be in their thermal comfort zone and the air and light quality should be optimal -> if this is not met as is often the case on farms, this is a huge stressor for pigs which can lead to tail biting

- good health status of pigs is required -> if not pigs are stressed

Success in keeping pigs with intact tails is a win-win situation for farmers and animals:

- The pig's pain, fear and frustration are reduced.
- Improved health and reduced antibiotic use.
- Economic benefits, also due to higher carcass weights and less condemned or trimmed carcasses.
- Better for the pig farming industry's reputation.

Literature

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