



**REPORT OF THE OIE AD HOC GROUP ON ANIMAL WELFARE AND  
PIG PRODUCTION SYSTEMS<sup>1</sup>**

**Paris, 29–31 August 2017**

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**1. Welcome and introduction**

The OIE *ad hoc* Group on Animal Welfare and Pig Production Systems (the *ad hoc* Group) met at the OIE Headquarters on 29–31 August 2017.

The members of the *ad hoc* Group and other participants at the meeting are listed at [Annex I](#).

Dr Matthew Stone, Deputy Director General of the OIE, welcomed and thanked the *ad hoc* Group on behalf of the Director General for their agreement to work with the OIE on this topic, and provided some background concerning recent OIE progress in respect of animal welfare. Dr Stone highlighted the adoption of the OIE Global Animal Welfare Strategy by the OIE General Assembly of delegates in May 2017. He further outlined the progress towards the establishment of the Forum on Animal Welfare, in order to provide better engagement with stakeholders, which will meet in 2018.

Dr Leopoldo Stuardo Escobar asked Members to carefully consider all comments provided by OIE Member Countries and partner organisations in the working document and the need to provide a clear rationale, particularly when not accepting a comment. Dr Stuardo also noted that while references were helpful in the working document to assist Delegates to understand the scientific basis of the recommendations, these would not be included in the text adopted by Delegates.

Dr Stuardo indicated that the report of the meeting will be presented to the OIE Terrestrial Animal Health Standards Commission (Code Commission) in September 2017, and it was anticipated that this would be circulated to OIE Members as an annex to the Code Commission report (normally in October).

The draft agenda was adopted without modifications. The adopted agenda is at [Annex II](#). Dr Birte Broberg, Chair of the *ad hoc* Group, opened the meeting thanking the members of the *ad hoc* Group for their dedicated work, and also the Member Countries and organisations in sending their constructive comments.

**2. Review of Member Countries comments on the draft chapter on Animal Welfare and Pig Production Systems**

The *ad hoc* Group developed a revised draft Chapter 7.X, which is included as [Annex III](#) for consideration by the Code Commission at its September 2017 meeting.

Some OIE Members and partner organisations made proposals without providing a (scientific) rationale, making it difficult to take these comments into account.

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<sup>1</sup> Note: This *ad hoc* Group report reflects the views of its members and may not necessarily reflect the views of the OIE. This report should be read in conjunction with the September 2016 report of the Terrestrial Animal Health Standards Commission because this report provides its considerations and comments. It is available at <http://www.oie.int/en/international-standard-setting/specialists-commissions-groups/code-commission-reports/meetings-reports/>

Comments were received from Australia, Canada, China, Japan, New Caledonia, New Zealand, Norway, Mexico, Switzerland, United States of America (USA), European Union (EU) and the International Coalition for Animal Welfare (ICFAW).

During the revision of this chapter and in response to a number of Member Countries comments, the *ad hoc* Group made various changes throughout the text to improve grammar, syntax, and clarity.

#### **Article 7.X.1.**

In response to Member Countries comments to replace "biological functioning" with "mental and physical wellbeing" in the final sentence of the third paragraph, the *ad hoc* Group agreed in part with comment and decided to replace "biological functioning" with "well-being", in order to harmonise the text with the new proposed definition of animal welfare. The *ad hoc* Group agreed to remove physical and mental health to improve the clarity of the sentence, as these are intrinsically linked to wellbeing.

The *ad hoc* Group did not agree with a Member Country comment to delete the last sentence of the third paragraph, as the justification to delete the sentence was partly taken into account by replacing "biological functioning" with "well-being".

Regarding Member Countries comments on the fourth paragraph that defines stereotypy, proposing to replace "and unvarying" by "which have no obvious purpose or function", and editing the second sentence as follows: "Permanent dysfunction of the central nervous system in response to stressful conditions may mean that developed stereotypies may not resolve despite later changes to the environment or other treatment." The *ad hoc* Group agreed with the rationale and modified the text to take the comment into account.

At the end of the sixth paragraph two Member Countries proposed to add a new sentence describing harmful redirected behaviours. However, the *ad hoc* Group did not consider it was necessary as tail biting is considered in other articles through the chapter.

#### **Article 7.X.2.**

The *ad hoc* Group added the word "commercial" before "domestic" to be consistent with the terms of Article 7.X.3.

#### **Article 7.X.4.**

A Member Country proposed to change "thresholds" to "parameters" as parameter refers to the measurements taken, rather than "threshold" which may be interpreted as referring to the welfare of the animal. Regarding this request the *ad hoc* Group recalled its previous discussion, and did not agree with the proposed change as it could cause some misinterpretation.

##### **1. Behaviour**

A Member Country comment proposed to separate behaviours as "normal" and "abnormal" and organise them into a table by "approach, measurable and indicators", as well as to revise these same criteria in other articles. The *ad hoc* Group considered that this approach was not appropriate as it could be open to misinterpretation and may also overlap with other articles content.

Regarding an Organisation comment to include "wallowing in excrement" as an example of behaviours that could indicate welfare problems, the *ad hoc* Group did not consider wallowing the appropriate term to be used, and there is no need to specify a behaviour as the article is not intended to list all behaviours.

The *ad hoc* Group agreed with a Member Country proposal to add “or health” and replace “of” by “in” as some of the descriptors are not behaviours, but are clinical signs of potential disease (e.g. respiratory rates, coughing) in order to improve the clarity and completeness.

In relation to a Member Country comment to replace “are” by “may be” and to add “and an alert disposition” at the end of the sentence, the *ad hoc* Group did not agree to add “may be” nor with the proposal to include “and an alert disposition” because the article is describing positive indicators.

2. Morbidity rates

In response to a Member Country proposal to delete “Rates of” and “above recognised thresholds” and add “individual animals” the *ad hoc* Group did not agree as the sentence is referring to herds not to individual animals and decided for the same reason to keep “rates of.”

3. Mortality and culling rates

In response to a Member Country proposal to add the phrase “Ideally, mortality and culling rates should be low, as this would indicate that the animals were healthy and productive.” The *ad hoc* Group considered the change unnecessary, because the proposal is related to animal health rather than to animal welfare and is already addressed in the recommendations.

6. Physical appearance

The *ad hoc* Group agreed with Member Countries proposal that body condition in this place should indicate compromised welfare, added “outside an acceptable range” after “body condition,” adapting the wording to be consistent with point 4 of this article.

The *ad hoc* Group did not agree with a proposal of a Member Country to add “abnormal” to “body condition”, as it would not add clarity to the existing text.

Regarding Members Countries proposals to remove "in indoor systems" in the fourth bullet point, the *ad hoc* Group agreed in order to improve the clarity.

Regarding the fifth bullet point, Member Countries proposed to delete the word “reddish” and add “abnormal” to “skin discoloration”, or just leave “skin discoloration” deleting “abnormal” the *ad hoc* Group agreed to delete “reddish” as skin discoloration in itself would be considered as abnormal.

The *ad hoc* Group did not agree with a Member Country proposal to add “or locomotion” to the end of the ninth bullet point, as it is covered already in bullet point 8 on lameness.

Member Countries proposed rewording the bullet point on “emaciation or dehydration.” A Member Country proposed to add “especially detectable” before piglets, and another Member Country asked to remove “in piglets” from the end of the bullet. Regarding these proposals the *ad hoc* Group agreed in order to make it clear that emaciation or dehydration is easier to detect in piglets.

To be consistent with the proposal of a Member Country to include “sunburn” to the Outcome-based criteria corresponding to article 7.X.22., the *ad hoc* Group agreed to include it in the fifth bullet point of this Article.

7. Handling response

The *ad hoc* Group agreed with a Member Country proposal to insert the word “may” to clarify that the list of indicators is not a complete list but a range of indicators.

In the first bullet point a Member Country proposed to insert the words “abnormal or excessive” before “vocalisation” to specify which type of vocalisation would be associated with poor human-animal relationships. The *ad hoc* Group agreed with the proposal, as there are several kinds of vocalisations in term of frequency and intensity.

On the same topic, another Member Country proposed to insert the words “high pitched” vocalisation, in this regard the *ad hoc* Group did not agree as vocalisation is not always high, and this was addressed by the amendments already made to the article.

#### 8. Lameness

Regarding the presence of lameness in pigs a Member Country proposed to insert the words “severely” and “severe” to specify the varying thresholds and level of lameness pigs can experience. The *ad hoc* Group did not agree as it is not necessarily the severity that will lead to difficulty for the pigs to access feed and water, and because the word “may” indicates that this may not happen in all cases.

#### 9. Complications from common procedures

A Member Country proposed adding the words “may be” instead of “are” regarding the procedures applied in pigs, as some are not always performed. The *ad hoc* Group did not agree with the proposal as it did not add clarity to the sentence as it is referring to the procedures performed that are specified in the text.

In respect of another Member Country comment regarding the same topic proposing to add “painful and are” with the same rationale, and to add a reference to anaesthesia and analgesia. Regarding both comments the *ad hoc* Group did not agree with the suggested changes because not all the procedures mentioned in the proposal are painful when carried out correct, and also the second part is a recommendation which is already mentioned in the article on recommendations. The *ad hoc* Group agreed to reinstate the reference to human safety to be consistent with the modifications done in Article 7.X.8.

Following a Member Country comment the *ad hoc* Group added “suffering” to the third bullet. The *ad hoc* Group considered that “suffering” is a term commonly used to denote negative or noxious subjective or emotional mental experiences. The term usually refers to strongly negative experiences. Suffering is not a demonstrable entity, despite the common use of the term in that way. It is a generic term representing negative or noxious mental experiences. These experiences relate to numerous specific sensations or emotions, examples of which for the present context include anxiety, fear and pain. Other relevant examples include severe breathlessness, thirst, hunger and nausea. Thus, an animal or person is said to be suffering when anxiety, fear, pain and/or distress become more intense and approach their maxima (derived from Mellor *et al.*, 2009).

The *ad hoc* Group discussed the need to include a definition of suffering in the Glossary, due to its use in this and other chapters in the OIE *Terrestrial Animal Health Code (Terrestrial Code)*, and proposed the following:

Suffering: means negative or noxious subjective or emotional mental experiences. These experiences relate to numerous specific sensations or emotions, and pertinent examples in this context include anxiety, fear and pain. Other examples include severe breathlessness, thirst, hunger and nausea. Thus an animal is said to be suffering when anxiety, fear, pain or distress become more intense and approach their maxima (derived from Mellor *et al.*, 2009).

Reference: Mellor D.J., Patterson-Kane E., Stafford K.J. *The Sciences of Animal Welfare*. Wiley-Blackwell Publishing, Oxford, UK, 2009.

Taking into consideration that there is already a definition of suffering in Chapter 7.8., on the use of animal in research and education, the *ad hoc* Group would like to recommend also, choosing which of the two is more comprehensive and appropriate for inclusion in the Glossary. The same could be applicable to the terms *pain* and *distress*, which are only applicable to Chapter 7.8., but they are mentioned in several other animal welfare chapters.

The *ad hoc* Group agreed with a Member Country suggestion to add “increased” to the bullet point on “mortality, mobility and culling” to improve the clarity.

#### **Article 7.X.5.**

Member Countries and an Organisation proposed replacing “7.X.26.” with “7.X.27.” as this article also provides recommendations for measures applied to pigs. The *ad hoc* Group agreed in order to improve readability.

The *ad hoc* Group agreed with Member Countries requests to reword the second paragraph to read “Each recommendation in Articles 7.X.6. to 7.X.24. includes ...” to clarify that outcome-based criteria are included up to Article 7.X.24.

The sentence “Ideally, from an animal welfare perspective these criteria should be optimised.” was added to the end of the third paragraph in Article 7.X.5. (Recommendations).

#### **Article 7.X.7.**

The *ad hoc* Group agreed with Member Countries comments, to change “food” to “feed” in the first paragraph to harmonise with other chapters of the *Terrestrial Code*. This change was done throughout the draft chapter for consistency.

In response to Member Countries request to replace “nibbling” with “biting,” the *ad hoc* Group agreed to delete the term “nibbling,” as it is not a broadly accepted term in current literature.

In response to a Member Country and an Organisation proposal to reword the fourth paragraph to read “and be able to move away from the handling aid”, the *ad hoc* Group considered it appropriate and agreed to the proposal in order to add clarity to the text. However, regarding the proposal to include the terms “stomach and ears”, the *ad hoc* Group only considered it necessary to include “ears”, as the “stomach” is an internal organ that cannot be visually evaluated.

In response to a request of a Member Country and an Organisation to add “loud noises”, the *ad hoc* Group agreed with the suggestion as it adds clarity to the text. However it did not agree with a Member Country proposal to add “and people should not raise their voices or make loud noises around pigs” to the fifth paragraph because it is already taken to account with the addition of “loud noises.”

#### **Article 7.X.8.**

In response to a Member Countries suggestion to reinstate “improve human safety”, the *ad hoc* Group agreed with this comment, as human safety is a critical component of human-animal interactions. Another Member Country suggested to replace “are” by “may be”, as some of these procedures are not always performed and the *ad hoc* Group agreed with the proposal as it improved the text.

Regarding a Member Country proposal to add in the second paragraph “or both” after “anaesthesia and analgesia”, as both are necessary to prevent pain during the procedure and more long-term pain, the *ad hoc* Group agreed with the suggestion clarifying that a combination of both would be appropriate.

The *ad hoc* Group did not agree with a Member Country suggestion to remove “only when necessary and” as it creates confusion and is superfluous in the phrase, whereas the first paragraph clearly defines when these procedures should be performed.

The *ad hoc* Group agreed partially with an Organisation proposal to replace the word “or” by “and” in relation to the use of “anaesthesia” and “analgesia” and deleted “and” adding “or both” to clarify that these can be used separately or together.

The *ad hoc* Group did not agree with the proposal or the rationale from a Member Country to delete the phrase: “e.g. using anaesthesia or analgesia under the recommendation or supervision of a veterinarian” as the point was needed to emphasise that both are important.

The *ad hoc* Group agreed partially with a Member Country proposal to insert the word “suffering” and did not agree to use “or/and” as opposed to “or” only, to keep the harmonisation with previous articles.

The *ad hoc* Group agreed with a Member Country proposal to insert in the third paragraph “or both” to refer to the use of analgesia and anaesthesia, because in some cases, both are necessary to prevent pain and for consistency with the previous paragraph.

The *ad hoc* Group agreed with Member Countries proposals to add “supervision and” before “recommendation, of a veterinarian”, to ensure consistency with the second paragraph of Article 7.X.8.

The *ad hoc* Group did not agree with a Member Country proposal to edit and remove the examples between parentheses in the third paragraph, or the rationale that the details provided in parentheses imply that these are the only options for meeting the “three R” requirements, and that it implies the OIE endorsement of these specific methods and procedures.

In the third paragraph, an Organisation and a Member Country also proposed reinstating “and” where describing the use of “analgesia and anaesthesia under the recommendation of a veterinarian” the *ad hoc* Group agreed to include “or both” to be consistent with the amendment in the second paragraph.

The *ad hoc* Group agreed in principle with a Member Country proposal to replace “entire” with “or intact” when referring to “entire or immunocastrated males” by rewording the sentence in order to differentiate entire males from those that were immunocastrated.

The *ad hoc* Group did not agree with a proposal from an Organisation to add a paragraph to clarify that routine tail docking should be avoided, as it is broadly agreed that tail docking should be avoided; however there is a need to take into account that production systems vary between regions and countries. The *ad hoc* Group also considered it was adequately covered in the existing text.

The *ad hoc* Group agreed with a proposal of an Organisation to add a new paragraph concerning “Ovariectomy”. The *ad hoc* Group agreed that this procedure is painful without analgesia and anaesthesia, and can be avoided by the use of an immunological product that is broadly used nowadays, and its use is supported by scientific evidence.

#### **Article 7.X.9.**

The *ad hoc* Group considered the rationale provided by a Member Country to modify the bullet points in relation to the quality and quantity of feed as appropriate and that the proposed amendments added clarity to the article. Regarding the deletion, in the second bullet point of the words “and behavioural”, the *ad hoc* Group agreed with the Member Country comment that it is not clear what is meant by “behavioural” and it is inconsistent with other OIE *Terrestrial Code* chapters on animal welfare. The *ad hoc* Group amended the bullet to add clarity.

The Member Country provided the following references to support this modification, which can be found in Bergeron *et al.* (2008), where the editorial introduction concludes that for sows (as with other ungulates) low fibre, high-concentrate diets that require little food-searching behaviour and consummatory behaviours, like chewing, result in unfulfilled motivations to perform these natural foraging activities, leading to increased oral stereotypies (oral stereotypic licking, bar-biting and sham-chewing). Also it has been shown in several studies that high-fibre diets, similar in dietary energy and major nutrient levels, fed to sows markedly increased feeding time and that this increased feeding time accounted for much of the differences in level of stereotypies between diets. Thus, these results support the view that expressing foraging and feeding behaviour can reduce stereotypies (Robert *et al.*, 1993, 1997; Brouns *et al.*, 1994; Ramonet *et al.*, 1999; Bergeron *et al.*, 2006). As a consequence the *ad hoc* Group added a bullet point on foraging.

The *ad hoc* Group did not agree with a Member Country proposal to reinstate the bullet point with “avoid metabolic and nutritional disorders” as it considered that recommendations relating to these disorders have been addressed by the two preceding points.

The *ad hoc* Group agreed with a Member Country proposal to replace “undue” by “excessive or potentially injurious” to prevent competition and injury over the provision of feed and water since this addition adds completeness and clarity.

The *ad hoc* Group decided to reinstate the paragraph about gastric ulcers as there are new references supporting the previous statement, giving evidence of this relationship.

The *ad hoc* Group did not agree with Member Countries proposals to reinstate the sentence “Pigs especially pregnant sows and gilts should be fed a diet with sufficient fibrous feedstuffs in order to satisfy their hunger”, as it is addressed by the new indent on foraging and the reinstated text on gastric ulcers (Herskin *et al.*, 2016).

The *ad hoc* Group did not agree with an Organisation proposal to insert “continuous” and “clean” when referring to access and quality of water, as it is not realistic and is covered by the concept of drinkable water.

Several Member Countries proposed rewording the last sentence of Article 7.X.9. regarding the appearance of dehydration by adding “especially detectable” before “piglets” for consistency with the comment made on Article 7.X.4. point 6 or deleting “piglets” as dehydration is a concern not only in piglets. Regarding this request the *ad hoc* Group agreed partially for consistency with the modified Article 7.X.4.

#### **Article 7.X.10.**

Regarding a Member Country proposal to add “materials” to “chewing foraging” it was agreed as it added clarity.

The *ad hoc* Group did not agree with a Member Country proposal to delete “(e.g. rooting, and biting or chewing)” but made some changes to keep the specification of the materials chewed to ensure better clarity.

The *ad hoc* Group did not agree with a Member Country proposal to add “provide for,” and remove “improve biological function” for completeness. However in order to improve clarity, the *ad hoc* Group changed “biological function” by “well-being”.

In the second paragraph a Member Country proposed to delete “multiple forms of” and add “social, occupational, physical, sensory or nutritional” before “enrichment” to specify the five categories of enrichment types. The *ad hoc* Group did not agree with this proposal as it is covered adequately in the following bullet points.

The *ad hoc* Group agreed with a Member Country proposal to add “regular direct physical contact associated with positive events, which may include food or scratching, or” to the third bullet point, to better clarify what are considered positive human contacts, and changed “food” to “feed” for consistency with other articles.

#### **Article 7.X.11.**

The *ad hoc* Group agreed with a Member Country comment to replace “recommendations” with “management procedures” in the second paragraph as this article lists management procedures rather than recommendations.

Regarding the proposal of a Member Country to consider inserting further relevant triggers and appropriate references in number 4, the *ad hoc* Group considered this addressed by agreeing with other Member Countries proposals to replace “in accessing the feeding area” with “for resources, including feed and water,” to add completeness and clarity to the sentence.

In response to an Organisation proposal to insert a new number “5) Wallowing in own excreta can be avoided by offering the animal proper indoor climate conditions (temperature and humidity), greater space allowance, and wallowing pool facilities” considering that it would be effective to alleviate hyperthermia, the *ad hoc* Group explained that it did not agree as this article is addressing normal behaviours and this concept is already addressed in Article 7.X.15.

The *ad hoc* Group agrees with a Member Country suggestion in number 2 to replace “sodium” by “of minerals,” as there are more minerals that could cause tail biting. The *ad hoc* Group also included the necessary scientific reference to support this modification.

#### **Article 7.X.12.**

The *ad hoc* Group agreed partially with some modifications proposed by a Member Country to add “if necessary” in the end of the first paragraph, with the justification that not all animal facilities are always related to animal welfare; the *ad hoc* Group reworded the sentence adding “to accommodate pigs” to specify that it is related to facilities in which pigs are kept.

A Member Country proposed to add six new bullet points regarding what housing systems should provide for, regardless of the design, housing and management. The *ad hoc* Group did not agree with the proposal as it would cause repetition and these bullet points are already addressed in other articles.

A Member Country proposed to insert “all pigs and in particular” in front of “pregnant sows and gilts” and to replace “should preferably” by “recommended”. The *ad hoc* Group considered this was appropriate to take into account, however modifying the text highlighting that it applied to all pigs.

Regarding a Member Country proposal to delete the sixth paragraph, the *ad hoc* Group deleted the last sentence as the deletion of this part of the paragraph was broadly supported by the literature presented.

#### **Article 7.X.13.**

##### **1. Group housing**

In relation to a Member Countries comment to delete “may” the *ad hoc* Group did not agree with this suggestion because floor space can interact or not with a number of factors. And regarding the same Member Country proposal to add “to affect pig welfare” the *ad hoc* Group agreed in order to improve the clarity of the sentence.



The *ad hoc* Group agreed with Member Countries request to insert a new paragraph on sufficient space and opportunities to escape from potential aggressors.

The *ad hoc* Group agreed in principle with some modifications proposed by a Member Country to add to the end of second (now third) paragraph “or individually house the aggressive pig,” as it improved the clarity of the sentence.

### 3. Stalls and crates

In relation to Member Countries recommendation to discourage the use of stalls and crates, the *ad hoc* Group did not agree to add the proposed new paragraph, as loose housing for pregnant sows is already included in Article 7.X12. Furthermore, the Group did not find enough convincing scientific evidence that the mortality rate of live born piglets could be kept as low as in crate farrowing and lactation systems. Until this problem is solved, the Group did not consider it appropriate to recommend loose housing systems for farrowing sows and gilts.

The *ad hoc* Group recognised that large comparative studies in Europe (Weber *et al.*, 2007; Kilbride *et al.*, 2012) show that crushing is higher in loose pens and mortality due to other causes (e.g. stillborn) was higher in farrowing crates.

While the Group, however, did acknowledge the evidence that piglets reared in farrowing crates may be deprived of some benefits relating to social development (e.g. piglets reared in loose farrowing and lactation systems show more play behaviour and less injurious behaviour, such as nibbling, sucking or chewing another piglet (Oostindjer *et al.*, 2011; Singh *et al.*, 2017), higher live-born piglet mortality in loose farrowing and lactation systems (e.g. Weber *et al.*, 2007; Kilbride *et al.*, 2012; Cronin *et al.*, 2014) is a serious concern. Since the majority of pre-weaning piglet mortalities occur within the first 2–3 days postpartum and are mainly caused by crushing, Johnson and Marchant-Forde (2009) concluded that farrowing crates can safeguard piglet survival and welfare during nest occupation in the farrowing phase, especially limiting early pre-weaning mortality.

The *ad hoc* Group additionally include the following references to support their position:

Cronin, G.M., Rault , J-L. and Glitz, P.C. (2014). “Lessons learned from past experience with intensive livestock management systems”. *Rev. sci. tech. Off. int. Epiz.*, 33 ( 1 ), 139-151.

Johnson, A. K. and Marchant-Forde, J. N. (2009). “Welfare of pigs in the farrowing environment.” In: *The Welfare of Pigs*, (ed.), Marchant-Forde, J. N., Springer Science and Business Media, New York City , USA , pp. 141–88.

KilBride, A. L., Mendl, M., Statham, P. , Held S. , Harris , M. , Cooper , S. and Green , L. E. ( 2012 ). “A cohort study of preweaning piglet mortality and farrowing accommodation on 112 commercial pig farms in England.” *Preventive Vet. Med.*, 104, 281–91.

Oostindjer, M., van den Brand, H., Kemp, B. and Bolhuis, J. (2011). “Effects of environmental enrichment and loose housing of lactating sows on piglet behaviour before and after weaning.” *Appl. Anim. Behav. Sci.*, 134, 31–41.

Singh, C., Verdon, M., Cronin, G.M. and Hemsworth, P.H. (2017). The behaviour and welfare of sows and piglets in farrowing crates or lactation pens. *Animal*, Agree; Agree 1 November 2016. DOI: 10.1017/S1751731116002573

In response to a Member Countries comment on a recommended period of time where sows or gilts are kept in gestation stalls, the *ad hoc* Group considered it was not necessary to add this sentence because it is too prescriptive and the idea is not too specific, and due to on-going controversy as to how many days should be adopted.

The *ad hoc* Group did not agree with a Member Country suggestion to reword the third bullet as it did not improve the clarity.

In response to a Member Country's comment to insert "or being injured by another pig" in the third bullet point, the *ad hoc* Group agreed as it improves the clarity of the point.

#### **Article 7.X.14.**

In response to an Organisation comments to insert new text relating to a recommendation to phase out fully slatted floor, the *ad hoc* Group did not consider the scientific references provided sufficient evidence to differ between partially and fully slatted floors in terms of foot and leg injuries and the ability to provide enrichment. The *ad hoc* Group could not find other references that could support a phasing out of fully slatted floors.

#### **Article 7.X.16.**

##### 1. Heat stress

The *ad hoc* Group did not agree with a Member Country's comment to insert the wording "more than 10% of" after "presence of faeces on the skin" in the fifth paragraph. The reference to the "Welfare Quality Assessment Protocol for Pigs, 2009" is only partly correct, as it depends on other factors, and can only be applied for sows (i.e. for growing pigs more than 20% is needed) and is too prescriptive.

In response to a Member Country proposal to add "lying postures and patterns" that can be a form of thermoregulation the *ad hoc* Group agreed with the suggestion considering it added clarity to the text.

The *ad hoc* Group agreed partially with a Member Country's comment on sunburn, and harmonised it with the new wording of Article 7.X.4. bullet point 6, Physical appearance.

##### 2. Cold stress

The *ad hoc* Group did not agree with a Member Country's proposal to insert the phrase "skin discoloration of more than 10% of the skin" after "piloerection", as the *ad hoc* Group could not find support for this in the "Welfare Quality Assessment Protocol for Pigs, 2009, where other parameters such as huddling or shivering are used for the assessment of cold stress.

#### **Article 7.X.17.**

A Member Country and an Organisation proposed the deletion of the phrase "Pigs are able to cope with a range of adaptable to different levels and types of noise. However," as well as to replace "minimised where possible" with "avoid" based on the fact that loud noises are known to be stressors and should be avoided. The *ad hoc* Group agreed with these suggestions to improve the clarity of the sentence.

The *ad hoc* Group also modified the article accepting a Member Country suggestion for clarity.

#### **Article 7.X.18.**

In response to a Member Country comment to delete the second paragraph, the *ad hoc* Group was of the view that the suggestion that pen locations with higher illuminances are less desirable was not well supported. While Taylor *et al.* (2006) saw more dunging in brighter pen areas, this may be because the pigs were more active in the light areas and preferred to dung away from their resting area (dark areas), not because the brighter areas were less desirable. The Olsen *et al.* (2001) study was referenced in this regard, but this study included too many other confounding variables to be of value in this discussion.

However, in principle the *ad hoc* Group agreed with the Member Country and removed the recommendation, but emphasized the requirements for a suitable photoperiod and provision of suitable lighting levels for caretakers to properly inspect pens and animals. The group further noted that this was justified because of a general shortage of studies looking at lighting levels, not because any contradictory results have been found regarding the 40 lux recommendation.

The *ad hoc* Group indicated there was a need for future research in this area. As well as not having a good understanding of the effects of different light levels on pig behaviour, the effects of different lighting regimes (photoperiod, intensity, spectrum) on growth, reproduction, melatonin secretion are poorly understood (Taylor, 2010).

#### **Article 7.X.19.**

The *ad hoc* Group agreed in part with a Member Country proposal to add the phrase “and if necessary be replenished [...] so that the sow or gilt has enough material to carry out proper nest building behaviour.” The text was modified and reworded by the *ad hoc* Group to add clarity and completeness to the sentence. However, in response to a Member Country proposal to replace “need” with “should be provided” and to delete the phrase “Nesting material should be provided where possible some days before farrowing (Yun *et al.*, 2014)”, the *ad hoc* Group did not agree with the rationale provided and considered that it was clear as written.

In response to a Member Country and an Organisation’s comment to replace “some” by “about two or three” or by “at least two” and to replace “before” by “prior to” farrowing, the *ad hoc* Group agreed to be more specific about the period when nesting material should be provided and added new references to this text.

The *ad hoc* Group agreed to delete the second paragraph of this article for consistency with the previous articles on housing and space allowance, as it was agreed not to recommend specific housing or farrowing systems as the existing literature is not conclusive in this sense.

#### **Article 7.X.20.**

The *ad hoc* Group did not agree with a Member Country proposal to add a new fourth paragraph, on the effect of a more prolonged weaning, as it was already stated in texts of the previous paragraphs.

In response to Member Countries proposals to amend the second sentence by deleting “be weaned at three weeks or older” and replacing it with “not be weaned before three weeks of age” and add “older age is recommended”, the *ad hoc* Group did not agree as they did not consider it brought clarity to the text.

The *ad hoc* Group agreed with a Member Country proposal to complete the phrase with “unless early weaning is required for the purpose of preventing infectious diseases”, but modified the text and added the related references, as it was appropriate to the context of the sentence.

In respect of other Member Country proposals in relation to the weaning of piglets the *ad hoc* Group considered most of these concerns were adequately addressed by the amendments already made to this paragraph. However, the *ad hoc* Group did find it relevant to insert a new paragraph on moving weaned pigs into clean and disinfected housing. The *ad hoc* Group did not accept the addition of a new paragraph in relation to the susceptibility of the piglets as it was already covered in bullet point 2 in Article 7.X.16.

The *ad hoc* Group agreed in part with the rationale of the Member Country proposal to insert “and sows” as weaning age can be as important for sow well-being as it is for piglets. However, as there is insufficient evidence that the length of the period of lactation could affect the sow’s body condition, they considered it more appropriate to add it to Article 7.X.19.

#### **Article 7.X.22.**

In response to Member Countries proposals to consider inserting the sentence “Including social effects into breeding programmes may also reduce negative social interactions and increase positive ones which may have major positive effects on group-housed animals” at the end of the second paragraph, the *ad hoc* Group agreed as it adds a further dimension and clarity to the text.

#### **Article 7.X.23.**

In response to a Member Country comment to delete the phrase “pigs should also be protected from pests such as excessive numbers of flies and mosquitoes,” the *ad hoc* Group did not agree that this is already covered in point 1 of Article 7.X.24., as the aim in that article is disease protection, while the aim in this article is animal welfare. However, the text was edited for clarity.

#### **Article 7.X.24.**

Regarding several Member Countries proposals to replace “pig” by “pigs” the *ad hoc* Group noted that this was already changed by the Code Commission in their last meeting in February 2017.

The *ad hoc* Group did not agree with an Organisation proposal to edit the first sentence under a) Animal health management to make it clear that individual animals, and not just the herd, should be covered in the *animal health management* plan, noting this paragraph is related to biosecurity.

Regarding a Member Country proposal to add “biosecurity and quarantine protocols, the acclimatisation of replacements, vaccinations, and good colostrum management”, the *ad hoc* Group agreed with the suggestion in order to complete the text.

The *ad hoc* Group did not agree with a Member Country proposal to delete “and fly control” as it is already addressed in point 1 of Article 7.X.24. However, the *ad hoc* Group agreed with another Member Country to change it to “insect control” as it is a more comprehensive term.

Regarding the proposal by a Member Country to add to the fifth and sixth paragraph of Item “a” the words “pain, suffering,” the *ad hoc* Group considered this was appropriate and consistent with inserting suffering in other parts of this chapter.

#### **Article 7.X.25.**

The *ad hoc* Group did not agree with Member Countries proposal to add to the second paragraph the phrase “Electricity installations and devices should also be checked and tested regularly, as a preventive measure to avoid outbreak of fire” as “short circuit” of electrical equipment has shown to be the most common risk for and cause of barn fires. The *ad hoc* Group noted that as this was related to the maintenance of the installations which may require professional assistance.

#### **Article 7.X.26.**

The *ad hoc* Group did not agree with a Member Country proposal to delete “humane killing” as it is intrinsic to animal welfare, or to replace it by “depopulation”. However, the *ad hoc* Group edited the text to improve clarity.

Regarding a proposal by a Member Country to replace "emergency" with the word "contingency" in order to ensure consistency with the title of Article 7.X.25., the *ad hoc* Group made the change considering it was adding clarity to the text.

### **Article 7.X.27.**

In response to the proposal of Member Countries, the *ad hoc* Group agreed to add “and the necessary equipment” to the fourth paragraph for clarity and completeness.

In response to some Member Countries and an Organisation comments the *ad hoc* Group amended the fourth bullet point to make the meaning more clear.

In response to a Member Country proposal to add a new Article related to Regulatory Assessment Procedures, the *ad hoc* Group considered the addition was not part of the scope, and even if it could be considered relevant, it was not only relevant for the animal welfare considerations but also relevant to animal health standards. The *ad hoc* Group recommended that the OIE Headquarters should consider this proposal further.

### **3. Programme for further work after this meeting**

The *ad hoc* Group discussed the possibility of future work. The report, including the amended draft chapter, will be discussed during the September 2017 meeting of the Code Commission, it is anticipated that the draft revised chapter will be annexed to the report of the meeting and circulated for Member Country comments. Depending on the number and the content of these comments that have to be addressed, OIE Headquarters will decide if another physical meeting is necessary. The possible date of the next meeting was tentatively scheduled for January 2018.

### **4. Other business**

No other new issues were proposed for discussion.

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.../Appendices



**OIE AD HOC GROUP ON ANIMAL WELFARE AND PIG PRODUCTION SYSTEMS**

**Paris, 29–31 August 2017**

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**List of participants**

**MEMBERS OF THE AD HOC GROUP**

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**OIE AD HOC GROUP ON ANIMAL WELFARE AND PIG PRODUCTION SYSTEMS**

**Paris, 29–31 August 2017**

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**Adopted agenda**

1. Welcome and introduction
  2. Consider Member Country's comments on draft Chapter 7.X. 'Animals welfare and pig production systems' and amend text as appropriate
  3. Programme for further work after this meeting
  4. Draft a report of the *ad hoc* Group meeting
  5. Other business
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*[Note: this Annex has been replaced by Annex 19 to the report of the meeting of the OIE Terrestrial Animal Health Standards Commission which was held on 18–29 September 2017.]*

