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Annex 34

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REPORT OF THE OIE AD HOC GROUP ON ANIMAL WELFARE AND PIG PRODUCTION SYSTEMS

Paris, 29–31 August 2017

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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Comments were received from Australia, Canada, China, Japan, New Caledonia, New Zealand, Norway, Mexico, Switzerland, United States of America, 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.

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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.

Annex 34 (contd)

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.

Annex 34 (contd)

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.

Annex 34 (contd)

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.

Annex 34 (contd)

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.

Annex 34 (contd)

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” before “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* Goup 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.

Annex 34 (contd)

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.

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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.

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.

Annex 34 (contd)

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.

Annex 34 (contd)**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.

Annex 34 (contd)**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.

.../Appendices

Annex 34 (contd)Annex I**OIE AD HOC GROUP ON ANIMAL WELFARE AND PIG PRODUCTION SYSTEMS****Paris, 29–31 August 2017**

List of participants**MEMBERS OF THE AD HOC GROUP**

Dr Birte Broberg (Chair)
Senior Veterinary Officer
Animal Welfare and Veterinary Medicine
Ministry of Environment and Food
The Danish Veterinary and Food
Administration
Stationsparken 31-33 | DK-2600
Glostrup Tlf.
DENMARK
Tel.: +45 72 27 69 00
bb@fvst.dk

Dr Jennifer A. Brown
Research scientist – Ethology
Prairie Swine Centre
Box 21057
2105 – 8th Street East
Saskatoon, Saskatchewan
S7J 5N9
CANADA
jennifer.brown@usask.ca

Dr Antoni Dalmau Bueno
Researcher
IRTA. Animal Welfare Unit
Monells (Girona)
Finca Camps i Armet, SN
SPAIN, ES-17121
Tel.: +34 902 789 449 + 1434
antoni.dalmau@irta.cat

Prof. Paul Hamilton Hemsworth
Director
Animal Welfare Science Centre
Faculty of Veterinary and Agricultural
Sciences
The University of Melbourne
Parkville, 3052
AUSTRALIA
phh@unimelb.edu.au

Dr Cleandro Pazinato Dias
Consultant IICA and MAPA
Av. José Gabriel de Oliveira,
915 ap. 1102 Torre I
Aurora - Londrina
86047360, PR
BRAZIL
Tel.: +55 43 911 269 38
cleandropazinato@uol.com.br

OIE HEADQUARTERS

Mrs Ann Backhouse
Head
Standards Department
a.backhouse@oie.int

Dr Leopoldo Stuardo
Chargé de mission
Standards Department
l.stuardo@oie.int

Dr Patricia Pozzetti
Chargée de mission
Standards Department
p.pozzetti@oie.int

Annex 34 (contd)

Annex II

OIE AD HOC GROUP ON ANIMAL WELFARE AND PIG PRODUCTION SYSTEMS

Paris, 29–31 August 2017

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

Annex 34 (contd)

Annex III

[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.]



Organisation
Mondiale
de la Santé
Animale

World
Organisation
for Animal
Health

Organización
Mundial
de Sanidad
Animal

Annex 35

Original: English
June 2015

MEETING OF THE OIE AD HOC GROUP ON EQUINE TRYPANOSOMOSES

Paris, 14–16 June 2016

A meeting of the OIE *ad hoc* Group on (non-tsetse transmitted) equine trypanosomoses (hereafter the Group) was held at the OIE Headquarters from 14 to 16 June 2016.

1. Opening

On behalf of Dr Monique Eloit, Director General of the OIE, Dr Brian Evans, Deputy Director General and Head of the Scientific and Technical Department, welcomed and thanked the Group for its efforts in reviewing the *Terrestrial Animal Health Code* (hereafter the *Code*) chapter on dourine and draft *Code* chapter on surra.

Dr Evans reminded the Group that dourine and surra were both OIE listed diseases, however recommendations for trade in live susceptible animals and their products, were currently only provided in the *Code* for dourine. He informed the Group that OIE Member Countries had expressed their need for trade standards applicable to surra as well, especially in the context of the OIE initiative with the International Equestrian Federation (FEI) and the International Federation of Horseracing Authorities (IFHA) for the facilitation of international movement of competition horses.

Dr Evans informed the Group that a previous OIE *ad hoc* Group on equine trypanosomoses had been conveyed in 2015 to draft a *Code* Chapter on surra and revise the *Code* Chapter on dourine. The report of this *ad hoc* Group was not endorsed by the *Scientific Commission for Animal Diseases* (hereafter the Scientific Commission) nor discussed by the *Terrestrial Animal Health Standards Commission* (hereafter the Code Commission); a new *ad hoc* Group has therefore been conveyed to finalise this task.

Dr Evans emphasized that the proposed standards should be pragmatic, based on risk mitigating approaches and on the best available science. Lastly, Dr Evans insisted on the importance of a detailed meeting report highlighting the scientific justifications of the proposed texts, as meeting reports are the main channel to communicate the rationale of the proposed standards to the Scientific and Code Commissions and to OIE Member Countries.

2. Adoption of the agenda and appointment of chairperson and rapporteur

In the absence of a member of the Group volunteering to chair the Group, Dr Baptiste Dungu, representative of the Scientific Commission, was exceptionally appointed as a Chair. Dr Charles E. Lewis acted as rapporteur. The Group adopted the proposed agenda.

The agenda and list of participants are presented as Appendices I and II, respectively.

Annex 35 (contd)**3. Presentation of the comments of members of the Scientific Commission and Code Commission on the report of the previous ad hoc Group**

Dr Dungu clarified that the work of the *ad hoc* Group on equine trypanosomoses that met in 2015 could be utilized by the Group as the reference document for discussion. He emphasised the need to further elaborate on it to fully meet Member Countries' expectations to resolve trade issues associated with equine trypanosomoses.

Dr Etienne Bonbon, President of the Code Commission, advised the Group to specifically concentrate on providing practical and science based guidance to Member Countries to manage surra and dourine, especially in the context of international trade.

4. Revision of the scope of the Code chapters

The Group extensively discussed the infections caused by trypanosomes in equids.

The Group reviewed the following article: Carnes J. *et al.* (2015) "Genome and phylogenetic analyses of *Trypanosoma evansi* revealed extensive similarity to *T. brucei* and multiple independent origins for dyskinetoplasty." *PLoS Negl Trop Dis.*, **9**(1): e3404 that describes that three out of the four known groups within the Trypanozoon subgenus cause the disease dourine. Unpublished data support that the Italian dourine outbreak was actually caused by a trypanosome very similar to *T. brucei* and *T. evansi* type B rather than *T. equiperdum*.

The group also reviewed the following articles: Claes Buscher *et al.* (2005) "*Trypanosoma equiperdum*: master of disguise or historical mistake?" *Trends in Parasitology*, **21**(7): 316-321 (a review with the proposal of a new definition for Dourine) and Zablotskij V.T., *et al.* (2003) "The current challenges of dourine: difficulties in differentiating *Trypanosoma equiperdum* within the subgenus Trypanozoon." *Rev. sci. tech. Off. int. epiz.*, **22**(3), 1087-1096.

Data from an unpublished project conducted by the United States Department of Agriculture (USDA) was also shared with the Group and discussed (unpublished report on the comparison of three reference isolates of *Trypanosoma equiperdum* in ponies).

The Group concluded that these studies converged in indicating that: (i) there is little genetic distinction between *T. evansi*, *T. equiperdum*, and *T. brucei*, (ii) clinical distinction of individual cases into surra or dourine is not possible, (iii) differential laboratory diagnostics of the infections are complex.

The Group therefore recommended combining the infection of equids with parasites of the subgenus Trypanozoon (*T. evansi*, *T. equiperdum*, or *T. brucei*) into a specific *Code* chapter. For consistency, the Group also noted that equids should be excluded from the draft *Code* chapter on infection with *T. evansi* (draft chapter 8.X). Under those provisions, Member Countries would report any infection with trypanosome in equids as an "infection with Trypanozoon in equids".

In brief, the Group determined that the best course of action was:

- To revise the current *Code* Chapter 12.3. on dourine to encompass all infections with Trypanozoon in equids;
- To dedicate the draft *Code* Chapter 8.X. to the infection of susceptible species other than horses with *T. evansi* (non-equine surra).

In drafting Chapter 8.X and revising Chapter 12.3, the Group routinely referred to the report from the *Meeting of the OIE Ad hoc Group on Equine Trypanosomoses – Paris, 21-23 July 2015*.

5. Draft Chapter 8.X. (Infection with *Trypanosoma evansi* – non equine surra)

Discussions on individual articles were as follows:

- In **Article 8.X.1 (General Provisions)**, the *Code* chapter drafted in 2015 mentioned that “*few human cases have been described*”. The Group clarified that the rare occurrence of cases of human infection with *T. evansi* was associated with the lack of serum factors that would normally have destroyed the parasite in the serum (ApoL1 lytic factor). The Group agreed that the General Provisions should concentrate on the facts and evidence supporting the recommendations to mitigate the risk of spread of infection in animals, including thorough management of outbreaks and safe trade in live susceptible animals and their products. Therefore, while acknowledging that the possible occurrence of cases of human infection was relevant in a public health perspective, the Group decided not to mention it in Article 8.X.1, since measures to prevent human cases of that infection were out of the scope of the chapter.

The Group debated the incubation period for infection with *T. evansi*. Due to the wide range of susceptible hosts, the incubation period is highly variable. The Group eventually determined that the best course of action was to utilise the maximum timeframe of six months.

The *Code* chapter drafted in 2015 stated that *T. evansi* can survive for one to two days in stomoxes and 72 hours in infected meat. Based on scientific evidence¹, the Group recommended revising the duration of survival of the parasite in stomoxes to 72 hours. Regarding infected meat, the Group was unable to find specific references in regard to the survival of the parasite for up to 72 hours. However, it was decided to leave this statement as the Group could not justify its removal without further clarification. In addition, considering that carnivores can be contaminated through the contact of the oral mucosa with the parasite contained in ingested fresh meat from infected animals (cases of stray dogs scavenging on slaughterhouse waste), the Group recommended that standard processing practices should be complied with in order to mitigate the risk of transmission through this route -including the prevention of contact between animal by-products and carnivores-.

- The Group established the list of safe commodities in **Article 8.X.2 (Safe Commodities)** on the basis of current knowledge².
- **Article 8.X.3 (Country or zone free from infection with *T. evansi* in one or more animal species)** was reviewed and the Group decided to include the possibility for a country to claim freedom in specific animal species.

Regarding the conditions for freedom recognition, the Group discussed referencing the point a of Article 1.4.6.1 that specifically addresses historical freedom (i.e. last occurrence of the infection more than 25 years ago) or the whole Article 1.4.6.1 (i.e. including point b that provides requirements to be complied with for at least 10 years to declare a country or a zone free from disease or infection if cases have occurred within the last 25 years). The Group decided that reference should be made to the whole Article 1.4.6.1 since the provisions for historical freedom alone would not suffice.

Point 2 of Article 8.X.3 requires that a free country or zone, adjacent to an infected one, should conduct adequate surveillance in an area of appropriate distance from the bordering infected country or zone in order to detect any case of infection with *T. evansi*. The Group discussed what should constitute an “appropriate distance” and agreed that it should be deemed appropriate in regard to the specific location of the concerned countries or zones, taking into consideration numerous factors such as the vector ecology, the epidemiological situation, the geographic isolation, etc. The Group therefore recommended that this distance should be defined by the Member Country based on an assessment of the relevant local parameters.

¹ Baldacchino F. *et al.* (2013).- Transmission of pathogens by Stomoxys flies (Diptera, Muscidae): a review. *Parasite*, **20**: 26.

² Desquesnes M. *et al.* (2013).- *Trypanosoma evansi* and surra: a review and perspectives on transmission, epidemiology and control, impact, and zoonotic aspects. *BioMed research international*.

Campigotto G. *et al.* (2015).- Experimental infection by *Trypanosoma evansi* in sheep: Occurrence of transplacental transmission and mice infection by parasite present in the colostrum and milk of infected ewes. *Veterinary parasitology*, **212**(3): 123-129.

Annex 35 (contd)

- **Article 8.X.4 (Recovery of free status)** was extensively discussed and reformatted. This article gives the possibility to handle an outbreak situation either by applying a stamping out policy or by treating infected or serologically positive animals. The Group insisted that alternatively, if these conditions could not be complied with, the recovery of the free status may also be based on the conditions provided in Article 8.X.3.

The Group discussed the feasibility of a stamping out policy in the light of the definition approved by the World Assembly during the 84th General Session in May 2016. This definition includes “*the cleansing and disinfection of establishments*”, however, it was unclear to the Group if the definition also includes disinsection/disinfestation as part of a stamping out policy. If the newly adopted definition does not account for this, the Group recommended that it should be incorporated.

There was detailed discussion regarding the conditions for a country or a zone to claim freedom after an outbreak of infection with *T. evansi*, especially when the control of the outbreak is based on the treatment of infected or serologically positive animals (Point 2.a.ii of Article 8.X.4). Indeed, trypanocide treatment may not always be curative, therefore, the Group recommended that parasitological screening and clinical observation of treated animals should be conducted monthly for at least 6 months to identify any persistence or relapse.

The proposed timelines and conditions for the recovery of a free status when the control of the outbreak is based on stamping out policy as described in Point 2.a.i of Article 8.X.4 are represented in Figure 1. Those described in Point 2.a.ii of Article 8.X.4 for a control based on a trypanocide treatments are represented in Figure 2.

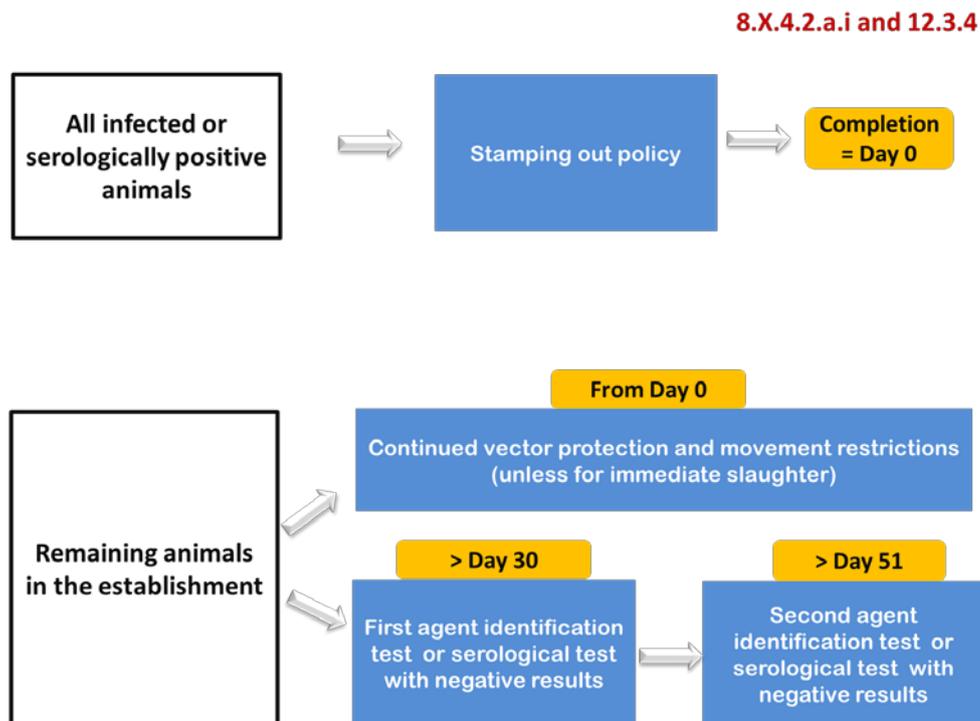


Figure 1. Recovery of a free status – Stamping out policy (Articles 8.X.4.2.a.i and 12.3.4)

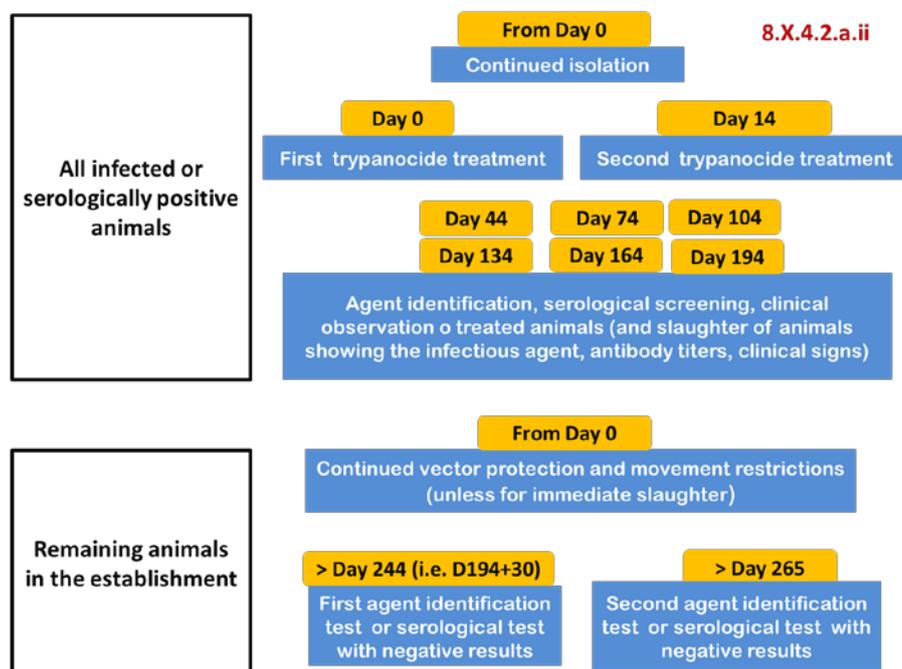


Figure 2. Recovery of a free status – Trypanocide treatment (Article 8.X.4.2.a.ii)

The Group agreed that after completion of the stamping out policy or the trypanocide treatment strategy, a specific surveillance for *T. evansi* should be conducted during a certain time period before the recovery of a free status can be declared (Point 3 of Article 8.X.4). The Group debated the duration of this surveillance period. The Group that met in 2015 recommended that it should be implemented for 2 years before the recovery of a free status (as stated in the *Meeting of the OIE Ad hoc Group on Equine Trypanosomoses – Paris, 21-23 July 2015*) or one year (as stated in the draft *Code* chapter annexed to this meeting report). Taking into consideration that the surveillance period would come in addition to the period during which the stamping out policy or the treatment strategy are applied (which would already take several months (i.e. about 2 months for a stamping out strategy and more than 8 months for a treatment strategy) and provide strong guarantees as to the status of the animal populations with regard to the infection with *T. evansi*) the Group determined that a surveillance period of six months would be acceptable for the purpose of this article.

- Since the Group had decided to include the possibility for a country or zone to claim freedom in specific animal species (see Article 8.X.3), **Article 8.X.5 (Recommendations for importation of camelids, carnivores, bovidae, pigs, cervids, elephants, lagomorphs, rodents and vampire bats)** was reorganized to include two sections: one for countries or zones free from infection in all host species (Point 2.a of Article 8.X.5) and one for countries or zones free in the imported species (Point 2.b of Article 8.X.5). To mitigate the risk of interspecific transmission, the Group agreed that animals imported from countries free in the imported species, but not in all other species should be isolated, protected against vectors and subjected to a diagnostic test prior to shipment. Animals imported from countries or zones not free in that specific species should be subjected to an additional test (two tests in total) (Point 2.c of Article 8.X.5).
- In regard to **Article 8.X.6 (Recommendations for importation of camelids, bovidae, pigs from an infected country or zone for direct slaughter)**, the Group insisted on the notion of direct slaughter to mitigate the risk of transmission. The Group specified that the animals should be transported directly from the establishment of origin to the approved slaughterhouse/abattoir in a vector protected vehicle without coming into contact with other susceptible animals.

Annex 35 (contd)

- **Article 8.X.7 (Recommendations for importation of semen)** was proposed as a novel article that the Group determined was necessary as there are reports of *T. evansi* present in the semen in rams.

Again, since the Group had decided to include the possibility for a country or zone to claim freedom in specific animal species (see Article 8.X.3), Article 8.X.7 was modelled in different sections covering: freedom in all animal species (Point 2.a of Article 8.X.7); freedom in the relevant animal species (Point 2.b of Article 8.X.7); absence of freedom in the relevant animal species (Point 2.c of Article 8.X.7). Taking into consideration the risk of interspecies transmission, the Group recommended that semen collected from a country or a zone free in the relevant species but not free in all species should be tested prior to entry in a semen collection facility. The Group recommended that in countries or zones not free in the relevant species, the donor males should be isolated and protected against vectors and the semen should be tested twice prior to entry in a semen collection facility.

The Group discussed the available assays to detect infection in semen and determined that microscopic evaluation would be unreliable and that, at this time, molecular assays (PCR) would be the most reliable assays. The Group recommended that testing of semen, including by molecular methods, should be further described in the *Terrestrial Manual*.

The Group considered that there was not enough scientific evidence to support concerns about embryos specific to *T. evansi*. The Group therefore determined not to include specific recommendations for embryos in the draft chapter 8.X. Member Countries should refer to the provisions of the *Code* chapter 4.7. (Collection and processing of *in vivo* derived embryos from livestock and equids) in that regard.

6. Revised Chapter 12.3 (Infection with *Trypanozoon* in equids (dourine, equine surra))

Discussions on individual articles were as follows:

- The Group formatted **Article 12.3.1 (General Provisions)** similarly to Article 8.X.1 of the draft *Code* chapter 8.X. Importantly, a statement was added to justify the unification of *T. evansi*, *T. equiperdum*, and *T. brucei* infections in equids in a single chapter.

A statement was also added to indicate that the transmission of *Trypanozoon* can be mechanical, venereal, or tse-tse transmitted (*T. brucei*).

The Group noted the lack of data concerning the survival time for *T. brucei* and *T. equiperdum* in contaminated meat, and defined the duration of survival of *Trypanozoon* in contaminated meat listed in the General Provisions (72 hours) in reference to *T. evansi*.

A case definition was modelled after the one produced for the chapter 8.X. The Group discussed the timelines and what constitutes a confirmed case. It determined that, for the purposes of this *Code* chapter, a serologically positive equid showing clinical signs of infection with *Trypanozoon* or epidemiologically linked to a case should be considered infected.

The Group discussed the incubation period of infection with *Trypanozoon* in equids. Subclinical infections are possible, so the Group considered it difficult to set an incubation period. It was noted that it could take 60 days for a horse to seroconvert and become antibody positive. In theory, the incubation period could be as high as two years according to field data collected during the Italian dourine outbreak. This period and the consequences of this timeframe were discussed. The previous *Code* chapter indicated an incubation period of six months for dourine. The Group consensus was that it would be best to define the incubation period as 30 days as this represents the timeframe noted for experimental infections.

Annex 35 (contd)

- In regard to **Article 12.3.2 (Safe Commodities)**, the Group discussed the similarities between the needs of this chapter and chapter 8.X. It was determined that wool, fibers and claws should be removed as this Chapter only references equids.
- The provisions of **Article 12.3.3 (Country or zone free from infection with Trypanozoon in equids)** were developed consistently with Article 8.X.3 (Country or zone free from infection with *T. evansi* in one or more animal species).
- **Article 12.3.4 (Recovery of free status in equids)** was referenced from Article 8.X.4 (Recovery of a free status), however considering that treatment would only work for *T. evansi* and *T. equiperdum* if the parasite has not spread to the central nervous system, the option of treating infected or serologically positive equids was not included in Article 12.3.4. Consequently, only the option of applying a stamping out policy was left for a swift recovery of a free status from infection with Trypanozoon in equids. Alternatively, the recovery of the free status may also follow the path described in Article 12.3.3.

Considering the potential for subclinical cases of infections, the Group recommended that a disease-specific surveillance system should be conducted for at least 6 months after completion of the stamping out policy. The Group also highlighted the importance of compliance with the *Code* chapter 4.1 (General principles on identification and traceability of live animals) to ensure an adequate surveillance.

The proposed timelines and conditions for the recovery of a free status described in the Points 3 and 4 of Article 12.3.4 are illustrated in Figure 1.

- The Group modelled the recommendations of **Article 12.3.5 (Recommendations for importation of equids)** after those defined in Article 8.X.5 (Recommendations for importation of camelids, carnivores, bovidae, pigs, cervids, elephants, lagomorphs, rodents and vampire bats).
- With regard to **Article 12.3.6 (Recommendations for the temporary importation of horses for competition purposes)**, the Group harmonised the conditions applicable to horses imported from a country or a zone free from infection with Trypanozoon in equids and not free from infection with *T. evansi* in all other species and those applicable to horses imported from a country or a zone not free from infection with Trypanozoon in equids. The rationale for that harmonisation is a presumed lower likelihood of transmission of the infection by horses imported on a temporary basis for competition purposes due to: (i) the shorter duration of the stay in the importing country, and (ii) the limited contacts with the local animal populations. However, the Group insisted that importing countries should consider the expected inherent risk associated with the horses imported under these conditions from a country or a zone not free from infection with Trypanozoon in equids and should keep them separated from the domestic population.
- The Group modelled the recommendations of **Article 12.3.7 (Recommendations for importation of equids from a country or zone not free from infection with Trypanozoon in equids for direct slaughter)** after those defined in Article 8.X.6 (Recommendations for importation of camelids, bovidae, pigs from an infected country or zone for direct slaughter), and the recommendations of Article 12.3.8 (Recommendations for importation of semen) after those defined in Article 8.X.7 (Recommendations for importation of semen). The Group consulted Chapters 4.5 and 4.6 for recommendations regarding semen collection and processing and noted that Chapter 4.6 does not address equids, but only references bovine, porcine, and small ruminant and it should therefore not be cross-referenced in Chapter 12.3.

Annex 35 (contd)**7. Recommendations for the revision of the *Manual* Chapters**

The Group expressed the need for revising the chapters 2.1.21. (*Trypanosoma evansi* infections [including surra]) and 2.5.3. (Dourine) of the *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals* (hereafter the *Manual*).

The Group was of the opinion that the *Manual* chapters should be aligned with the proposed scope of the *Code* chapters. Therefore the Group suggested the Scientific Commission to refer to the Biological Standards Commission consideration's on whether a *Manual* chapter on infections with Trypanozoon in equids should replace the current *Manual* chapter 2.5.3. on Dourine -on the model of the *Manual* chapter 2.1.4. [Brucellosis (*Brucella abortus*, *B. melitensis* and *B. suis*)]-.

The Group reviewed the following recommendations for revisions to the OIE *Manual* listed in the report from the *Meeting of the OIE Ad Hoc Group on Equine Trypanosomoses – Paris, 21-23 July 2015*:

- “The Surra *Manual* chapter should specify that in case of detection of *T. evansi* the agent identification test should include a PCR in order to exclude as a first step *T. brucei*;
- The Surra *Manual* chapter should contain also a “fit for purpose test” table, as already included in the Dourine chapter;
- The Dourine *Manual* chapter should be aligned to the *Code* chapter regarding the use of the term “breeding animals”;
- Include in the *Manual* a statement that treatment is possible for both diseases, but only for the bloodstream form, not once the parasite has crossed the cerebrospinal fluid barrier”.

The Group disagreed with the statement suggesting that “the Surra *Manual* Chapter should specify that in case of detection of *T. evansi* the agent identification test should include a PCR in order to exclude as a first step *T. brucei*” on the basis that such a distinction is not systematically necessary: (i) if an animal is found with trypanosomosis in a non-tsetse endemic country, *T. brucei* would not be included on the differential diagnosis list; (ii) the treatment of the animal would be the same if it is infected by *T. evansi* or by *T. brucei*. The Group therefore concluded that this recommendation would be irrelevant outside of the African continent where tsetse flies are endemic. The Group recommended that a battery or panel of PCR assays should be conducted to distinguish *T. evansi*, *T. equiperdum*, and *T. brucei*.

The Group unanimously supported the statement that “The Surra *Manual* Chapter should contain also a “fit for purpose test” table, as already included in the Dourine chapter”.

In addition, the Group listed a number of other issues that would need to be addressed in the *Manual* chapters and recommended to forward them to the *Biological Standards Commission*:

- the occurrence of human cases of infection with *T. evansi* (as evocated in the section 5 of this report, Article 8.X.1);
- the pathogenicity of *T. evansi* in the different host species;
- the reasons why more than one test might be required to establish an individual health status (Articles 8.X.4, 8.X.5, 8.X.7, 12.3.4, 12.3.5, 12.3.8);
- the efficacy of trypanocide treatments (including the penetration of drugs into tissues and the central nervous system and the use of serology to monitor efficacy of treatment's);
- criteria for the genetic characterization of the trypanosome species;
- molecular methods for testing semen.

Annex 35 (contd)

In addition, the Group expressed needs for:

- the validation of assays for the detection of *T. evansi* in the different host species;
- the characteristics of the PCR assays (sensitivity, specificity);
- the definition of reference strains;
- the definition of diagnostic pathways.

8. Adoption of the report

The Group reviewed and amended electronically the draft report provided by the rapporteur. The Group agreed that the report captured the discussions.

.../Appendices

Annex 35 (contd)

Appendix I

OIE AD HOC GROUP ON EQUINE TRYPANOSOMOSES

Paris, 14–16 June 2016

Terms of Reference

On the basis of the preliminary work conducted by the OIE ad hoc Group on equine trypanosomoses conveyed in Paris in July 2015, further develop a *Code* Chapter on Surra and revise the *Code* Chapter on Dourine.

Adopted agenda

- 1) Opening
 - 2) Adoption of the agenda and appointment of chairperson and rapporteur
 - 3) Presentation of the comments of members of the Scientific Commission and Code Commission on the report of the previous *ad hoc* Group
 - 4) Revision of the scope of the *Code* chapters
 - 5) Chapter 8.X. (Infection with *Trypanosoma evansi* – non equine surra)
 - 6) Chapter 12.3 (Infection with *Trypanozoon* in equids (dourine, equine surra))
 - 7) Recommendations for the revision of the *Manual* Chapters
-

Annex 35 (contd)Appendix II**OIE AD HOC GROUP ON EQUINE TRYPANOSOMOSES**

Paris, 14–16 June 2016

List of participants**MEMBERS**

Philippe Büscher

Department of Biomedical Sciences
 Institute of Tropical Medicine
 Nationalestraat 155
 B-2000 Antwerpen
 BELGIUM
 pbuscher@itg.be

Ilaria Pascucci DVM PhD

Istituto Zooprofilattico Sperimentale
 dell'Abruzzo e del Molise
 "G. Caporale"
 Campo Boario
 64100 Teramo
 ITALY
 i.pascucci@izs.it

Dr. Marisa Gonzatti

Simon Bolivar University
 Department of Cellular Biology
 Miranda
 VENEZUELA
 mgonzat@usb.ve

Dr Louis Touratier

228 boulevard du Président Wilson
 33000 Bordeaux
 FRANCE
 louistier@aol.com

Charles E. Lewis, DVM, MPH

Veterinary Medical Officer
 Hemoparasitic Reagent Unit
 USDA National Veterinary Services
 Laboratories
 1920 Dayton Avenue
 Ames, IA 50010
 USA
 charles.e.lewis@aphis.usda.gov

OBSERVERS

Dr Anthony Kettle

Observer on behalf of the International Federation
of Horseracing Authorities (IFHA) and the
 Fédération Equestre Internationale (FEI)
 an.kettle@gmail.com

SCAD REPRESENTATIVE

Dr Baptiste Dungu

MCI-Sante Animale
 26 Dalrymple Crescent
 Edinburgh EH9 2NX
 Scotland
 UNITED KINGDOM
 Tel.: +212 523 30 31 32
 Fax: +212 523 30 21 30
 B.DUNGU@mci-santeanimale.com

CODE COMMISSION REPRESENTATIVE

Dr Etienne Bonbon

President of the OIE Terrestrial Animal Health Standards
 Commission
 e.bonbon@oie.int

OIE HEADQUARTERS REPRESENTATIVES

Dr Brian Evans

Deputy Director General
 b.evans@oie.int

Dr Susanne Münstermann

OIE Scientific and Technical Department
 s.munstermann@oie.int



Organisation
Mondiale
de la Santé
Animale

World
Organisation
for Animal
Health

Organización
Mundial
de Sanidad
Animal

Annex 36

Original: English

August 2017

REPORT OF THE MEETING OF THE OIE *AD HOC* GROUP ON VETERINARY PARAPROFESSIONALS

Paris, 31 July–2 August 2017

The OIE *ad hoc* Group on Veterinary Paraprofessionals met from 31 July to 2 August 2017 at the OIE Headquarters in Paris, France.

1. Welcome, introductory remarks and introduction to the OIE

Dr Tomoko Ishibashi, OIE Senior Manager, Horizontal Coordination and Special Projects, welcomed the participants on behalf of the OIE and reiterated the importance of veterinary paraprofessionals (VPPs) in the current working programme of the OIE. Commenting that strengthening Veterinary Services continues to be a priority issue for the OIE, she informed the *ad hoc* Group (the Group) about the “PVS Think Tank” held in April 2017, which invited a diverse group of 74 participants comprising OIE Member representatives, Donors/Partners, OIE Staff and PVS Pathway Experts to review the programme’s successes, build on lessons learned and collectively plan for the strategic evolution of the PVS Pathway.

Thanking the Group for its support, Dr Ishibashi summarised the development of the work since the first meeting of the Group in November 2016. Two subgroups were convened earlier this year, one for animal health and veterinary public health and another for laboratory diagnosis. At the subgroup meetings, discussion was deepened based on the products of the first Group meeting. Also, lists of necessary competencies were drafted, together with sets of knowledge, skill and ability (KSA) for 24 identified spheres of activity (SOA). The OIE team then developed a draft competency document based on the work of subgroups, considering the style of an equivalent existing document for veterinary education, namely, the “OIE recommendations on the Competencies of graduating veterinarians (‘Day 1 graduates’) to assure National Veterinary Services of quality.” She explained that the OIE’s initiative to strengthen veterinary paraprofessional, including the work of the Group, was reported on to Members at the 85th General Session in May in her presentation titled, “Follow-up to the Recommendations of the Fourth OIE Global Conference on Veterinary Education”. Noting that the Members are expecting a draft competency document be shared soon, Dr Ishibashi expressed the OIE’s desire that the Group review, elaborate and refine the draft document so that it will be ready for open consultation.

It was agreed that Dr Johan Oosthuizen continue to act as the chairperson and it was confirmed that the OIE staff would be the rapporteur. The adopted agenda and list of participants are presented in Annexes I and II of this report, respectively.

Annex 36 (contd)**2. Progress report since the first meeting in November 2016****2.1. Discussion at the Subgroup on animal health and veterinary public health (21–23 February 2017)**

Dr Johan Oosthuizen, the chairperson of the Subgroup on animal health and veterinary public health, provided the Group with the following summary report.

The OIE *ad hoc* Group on Veterinary Paraprofessional - Subgroup on animal health and veterinary public health met from 21 to 23 February 2017 at the OIE Headquarters in Paris, France. Dr Matthew Stone, OIE Deputy Director General of International Standards and Science, welcomed the participants and reiterated the importance of veterinary paraprofessional (VPPs) in the current working programme of the OIE. Thanking the Subgroup for its support and stressing the need for the Subgroup's expertise, he provided the participants with some background remarks on this initiative, especially concerning bringing more structure, consistency, and guidance to the diverse functions of VPPs. Dr Stone concluded that the specific objectives of the Subgroup are to focus on the animal health (AH) and veterinary public health (VPH) tracks and to develop recommendations for minimum competencies and guidelines on core curricula for VPPs.

The Subgroup's main responsibility was to refine the Competency Matrix for the AH/VPH tracks, based on the work of the core ad hoc Group, and submit the Subgroup's work back to this core ad hoc Group for finalisation of the draft. To this end, the Subgroup examined the SOA and their Definitions, Learning Objectives, and Competencies considered necessary for each SOA.

The Subgroup reviewed the current VPP situation around the world, starting from the presentations by the new Subgroup members followed by the analysis conducted by the IIAD.

Dr Karoon Chanachai of Thailand, Dr Vutha Pheng and Dr Slobodan Sibalic of Serbia each presented overviews of the VPP training situation in their respective countries, while Dr Ilagi Puana presented an overview of the roles, training and recognition of VPPs from the perspective of the Secretariat of the Pacific Community (SPC).

Dr Heather Simmons of IIAD presented the IIAD analysis of several different sets of data within the OIE: WAHIS analysis, OIE VPP questionnaire, and the PVS Pathway Critical Competencies related to VPP as well as a regional analysis of the ratio of veterinary paraprofessional to veterinarians using 2015 WAHIS data.

Dr Simmons also presented the work done by the IIAD, based on the discussion of the core *ad hoc* Group in November, in the preparation of the Competency Matrix for the Subgroup's consideration: IIAD identified 24 SOA, many of which represented cross-cutting categories (e.g., biosafety and biosecurity, primary animal health care) which will apply to the formal training of all VPPs, but possibly with differing objectives and perspectives.

Following the presentations, the Subgroup undertook to examine the list of SOA and associated definitions as proposed by the core ad hoc Group and made some modifications, including merging of some related Spheres to produce a validated list of 19 SOA.

The Subgroup also examined Competencies for each SOA and developed Knowledge, Skills and Abilities (KSA) for each Competency. Through this exercise, 108 Competencies originally identified by the core ad hoc Group under 24 SOA were reconsidered, reordered and, with removal of redundancies, reduced.

Dr Simmons then presented the preliminary work done in the preparation of the Curricula Matrix for the Subgroup's information. IIAD has developed a database of existing curricula used for the training of VPP around the world.

Although the AH/VPH Subgroup discussed curricula, it was well noted that the work done on the Competencies and the KSA would be the basis of the future development of guidelines of curricula requirements.

2.2. Discussion at the subgroup on laboratory diagnosis (14-16 March 2017)

Ms Barbara Martin, the chairperson of the subgroup on laboratory diagnosis, provided the Group with the following summary report.

The OIE *ad hoc* Group on Veterinary Paraprofessional - Subgroup on Laboratory Diagnosis met from 14 to 16 March 2017 at the OIE Headquarters in Paris, France. Dr Monique Eloit, Director General of the OIE, welcomed the participants and reiterated the importance of veterinary paraprofessional (VPPs) in the current working programme of the OIE. Ms Jennifer Lasley presented the main outputs and conclusions of the first meeting of the core *ad hoc* Group meeting in November 2016 and explained the Terms of Reference of the Subgroup.

Several presentations were provided related to VPPs in laboratories. Dr Geneviève Libeau, France, Dr Ronald Mora, Costa Rica, Dr Peter Kirkland, Australia and Dr Johan Oosthuizen, South Africa, each presented an overview of each country's laboratory VPP training programmes.

Dr Samuel Thevasagayam presented the Bill and Melinda Gates Foundation's view on livestock and agriculture development and the need for countries to work with the private sector and establish partnerships.

Ms Barbara Martin, representing IIAD, OIE Collaborating Centre on Biological Threat Reduction, presented an analysis of several different sets of data within the OIE: WAHIS analysis, OIE VPP questionnaire, and the PVS Pathway Critical Competencies related to VPP. Ms Martin presented the work done by IIAD, based on the discussion of the Core *ad hoc* Group in November, in the preparation of the Competency Matrix for the Subgroup's consideration and to provide the basis upon which the Subgroup would work.

It was agreed that the Subgroup should explore competencies under all SOA relevant to Laboratory VPPs and should provide its input for consideration of the Core *ad hoc* Group. With these clarifications, the Subgroup spent some time individually examining the SOA, their definitions and their learning objectives.

The Subgroup examined the list of SOA and associated Definitions and Learning Objectives as proposed by the Core *ad hoc* Group and subsequently refined by the AH/VPH Subgroup. The Laboratory Subgroup validated **18** SOA and their associated Definitions and Learning Objectives, with a strong recommendation to merge two existing SOA, 'Surveillance' and 'Disease Prevention and Control Programmes'. The Subgroup also recommended that the "Laboratory Testing" SOA be changed to "Laboratory and Field Testing", to form a common SOA.

The Subgroup examined Competencies for each SOA and developed Knowledge, Skills and Abilities (KSA) for each Competency. Through this exercise, 108 Competencies originally identified by the Core *ad hoc* Group under 24 SOA were reconsidered and reordered, with removal of redundancies. The Subgroup also allocated the level ('basic' or 'advanced') for each KSA.

Since the laboratory VPP category does not exist in the current system, little is known about the global laboratory VPP workforce.

From the Subgroup's discussion, the following questions emerged to be considered by the Core *ad hoc* Group:

- Laboratory VPPs can be hired with little training (i.e., right out of high school) and be trained in-house as a Technical Officer. At which point in a laboratory VPP's career should they be expected to have acquired or demonstrate these 'minimum' competencies?
- The Subgroup reflected on the need to describe basic prerequisites for entering into a VPP training programme (e.g., HS diploma, math competencies, etc.) in a preamble at the beginning of the future 'minimum competencies' document.

- The Subgroup considered the title ‘Day 1 Competencies for VPP’, but concluded that ‘Minimum Competencies of VPP at each level’ may be a more appropriate term for the Subgroup’s principal output.
- Redundancies may still occur in the Competencies and KSAs across the SOA. While inevitable and necessary in some cases, these redundancies will need to be addressed by the Core *ad hoc* Group.
- The nature, structure, phrasing, and level of detail vary among Competencies and KSAs. It will be necessary to review and harmonise from the overall perspective of the document to ensure consistency among Competencies and KSAs.

2.3. Drafting the Competency Document

Dr David Sherman reported on his effort to streamline the SOA document previously prepared by the *ad hoc* group and modified by the AH/VPH and Lab sub groups. The original document had 26 SOA and 108 Competencies and contained considerable duplication. Dr Sherman explained that he reviewed the document in the context of the OIE recommendations on the competencies of graduating veterinarians (Day 1 Graduates) to develop a similar stylistic approach as OIE Delegates and other interested parties were already familiar with and using that document. He reviewed, consolidated and reworded the SOA and Competencies, arriving at 16 SOA and 43 Competencies and added the relevant definitions to each SOA. The content of SOA and Competencies that were removed from the document were for the most part, included in or integrated into the remaining spheres and competencies. For example, Epidemiology was eliminated as a separate SOA and integrated instead into Disease Prevention and Control Programmes. He also reordered the remaining SOA to broadly reflect the sequence that they might follow when adapted into a working curriculum. Dr Sherman expressed his appreciation of the feedback that was received by the *ad hoc* group members on this revised document which would be discussed further and finalized during the present *ad hoc* group meeting.

3. Examination of the draft Competency Document

Following Dr Sherman’s explanation, the Group thoroughly reviewed comments on the draft for each SOA provided by colleague members in advance. Considering the desire for simplicity and the fact that substantial portion of the text is common among the tracks, the Group agreed that there should be one single competency document, rather than several such documents distinguished by track or by level. The Group discussed whether the merging of 16 SOA in the draft appropriately captures necessary competencies, in particular, whether “infectious diseases” should be developed as a standalone SOA. It was determined that “infectious diseases” would be most appropriately dealt with among the competencies under SOA 1 (animal and veterinary science) and SOA 2 (laboratory science), rather than as a standalone SOA/competency. After agreeing on the overall text, the Group examined each SOA and annexed competencies from the viewpoint of relevance to tracks: in case a specific point within one competency description is inapplicable to a specific track, a footnote would be used to indicate such details. The Group noted that for many competencies, VPPs in veterinary public health should have the competency but do not require it as the same depth as necessary for VPPs in the Animal Health. Consequently, the Group agreed that the veterinary public health track should be indicated for each competency that is relevant, even to a slight degree, and that the degree of detail/depth needed be reflected in the core curricula to be developed. The Group then considered for each competency whether it should be regarded as appropriate for all relevant VPPs (basic) or whether it should be regarded as appropriate only for experienced VPPs (advanced).

The Group agreed that 16 SOA should be listed from basic science to practical activities, and that within each SOA, competencies should be listed from basic to advanced. (See [Annex III](#))

Annex 36 (contd)

Considering that the concept of VPPs is still unclear or unstandardized as compared with veterinarians, with relatively much wider variety of VPPs and their training among regions and countries, the Group agreed that relevance of the text should be interpreted in the context of each country, notably according to the country's regulations. For example, according to the domestic laws of some countries, meat inspection is not included in VPPs' activities. The Group also reconfirmed OIE definition of VPPs, i.e. they should work under the responsibility and direction of a veterinarian. In order to avoid misunderstanding, such assumptions in the competency document should be well explained in its introductory portion. The Group decided to draft the introductory portion, including background, scope and terminology definitions.

4. Brainstorming of core curricula to develop

- **Current analysis summary**

Dr Heather Simmons provided a presentation titled, "Curriculum Analysis Summary", to the OIE *ad hoc* Group on VPPs which communicated the methods, results, and implications of the OIE VPP Curricula analysis from 14 OIE Member Countries. A systematic qualitative analysis from 25 Programmes (n = 19 Animal Health/Veterinary Public health and 6 Laboratory) was conducted by cross-referencing learning objectives, course descriptions, and syllabi against the developed VPP SOA and competencies. Data was graphically represented three levels (i.e., programme, SOA and competency) for both tracks.

Common SOA among AH/VPH programmes included, animal and veterinary sciences, animal production and economics, animal handling and welfare, and disease prevention and control programmes. For the laboratory programmes, laboratory biosafety, laboratory science, laboratory and field testing protocols, and record keeping were the most common SOA, appearing in more than two-thirds (67%) of programs in the sample. Limitations of the analysis include 1) difficulties in comparing programs due to a lack of a common unit of measurement (contact hours, credit hours, etc.), 2) varying levels of detail which may cause some programs to appear artificially less rigorous, 3) limitation in geographical diversity for the program data received, and 4) a greater representation of AH/VPH curricula vs. Laboratory curricula. The analysis revealed a need for stronger VPP educational standards based on OIE recommended SOA and competencies, along with a rubric to measure a country's adherence to the standards.

The Group expressed appreciation for and great interest in the analysis presented by Dr Simmons. The analysis revealed that some SOA and annexed competencies that the Group considers important are not recognised by most if not all curricula analysed: they are "veterinary legislation" and "specimen collection and sampling" in animal health and veterinary public health curricula, and "animal handling and animal welfare" in the laboratory curricula. Although the response of some OIE Members requested by the OIE to provide existing curricula is not yet satisfactory, the Group agreed to make additional efforts to collect more curricula and encouraged Dr Simmons's team to advance the analysis if possible.

- **Duration**

The Group noted that the analysed curricula included curricula for limited-duration training courses of several weeks only. While OIE's guidelines to be developed should not be prescriptive, noting that what is aimed for is systematic training, rather than issue-specific purpose-by-purpose training, the Group considered that a certain minimum duration should be assumed in developing guidelines of model curricula. The Group agreed to consider that a minimum one-year to two-year training is required, with the exception of very intensive five-month training applicable in post-conflict situations, as was developed in Afghanistan.

- **Tracks**

The Group agreed to develop core curricula for three tracks, while noting that VPH is an addition after the basic AH programme.

Annex 36 (contd)

- **Strategy for initial work and future development**

The Group considered that, corresponding to the two levels of competencies, developing core curricula for basic and advanced would be appropriate at this moment. Although some countries, such as South Africa, have more comprehensive programmes for VPPs that include four-year degree programmes and graduate courses, further expansion should be an issue in the future after monitoring the use of the core curricula to be developed.

5. Examination of course contents based on the Competency Document

The Group attempted a matching exercise using existing curricula, comparing course content to SOA/competencies, but found that this exercise requires very good knowledge of the particular curriculum and is thus not possible. It was agreed that this exercise would be conducted by certain members and additional experts who are responsible for actual VPP curricula development.

The Group then decided to work in the opposite direction: listing necessary course content for each SOA. It was agreed that this exercise will be completed in the near future by several members who volunteered to undertake this responsibility.

6. Way forward

Dr Ishibashi expressed appreciation for the Group's dedicated work as well as her reassurance that the draft competency document will be completed. She noted that once developed, the draft competency document will, after the HQ's internal review, be presented to the Terrestrial Animal Health Standards Commission at its September meeting and then be circulated among OIE Members. While reiterating that the competency document will not constitute OIE standards and so not be subject to voting by Members for adoption, she stated that comments are most welcome in order to improve the document's applicability and that the Group may need to consider comments to be reflected before publication. Dr Simmons proposed that a one-page survey be developed as an attachment to the draft competency document in order to facilitate commenting by Members. The Group agreed the idea.

Dr Oosthuizen noted that the next step is to draft curricula based on the results of the course listing exercise and the more detailed matching exercise of existing curricula and SOA/competencies. Dr Simmons will prepare a format for use in the matching exercise.

Considering the very technical nature of curricula development, Dr Oosthuizen noted that drafting of curricula documents, planned for some time in November 2017, should be worked on by a small group of experts with actual curricula development experience. The Group was informed that the date for convening the core *ad hoc* Group is still undecided.

7. Other matters**Report of preparation of the Regional Conference on Veterinary Paraprofessionals in Asia**

Dr Ishibashi briefly informed the Group that the OIE and GALVmed will hold a Regional Conference on Veterinary Paraprofessionals in Bangkok, Thailand, from 6 to 8 December 2017, following the success of a similar conference held in South Africa in 2015. The upcoming Conference would provide a good opportunity for the OIE to present the work on developing minimum competencies and core training curricula for veterinary paraprofessionals. Dr Ishibashi expressed her expectation that the discussion at the Conference about the draft competency document, which will by then have been published for open consultation, would provide good feedback for the finalisation of the document.

.../Annexes

Annex 36 (contd)Annex I

**OIE AD HOC GROUP ON VETERINARY PARAPROFESSIONAL
Paris, 31 July–2 August 2017**

List of participants

MEMBERS OF THE OIE AD HOC GROUP

Dr Johan Oosthuizen (Chair)
President
South African Association of Veterinary
Paraprofessionals
Pretoria
SOUTH AFRICA
Tel.: 011 471 2984
oostej@unisa.ac.za

Dr Samuel Niyi Adediran
Asst. Director Market Development &
Access
GALVmed, Africa Office
4th Floor, Wing C – Suite B
Galana Plaza
Galana Road, off Arwings Kodhek Road
P. O. Box 52773-00100
Nairobi, Kenya
Tel : +254 (0)772 157 782 ext 302.
niyi.adediran@galvmed.org

Dr Benson Oduor Ameda
President
Africa Veterinary Technicians Association
Nairobi
KENYA
b.amedaba@gmail.com

Dr Markus Avong
Veterinary Council of Nigeria
P. O. Box 2092, GPO Jos
Plateau State
NIGERIA
Tel.: +234 803 429 7372
avongam2000@yahoo.com

Dr Miftahul Islam Barbaruah
Director, Vet Helpline India
House No.31/32 (Near Masjid No.1)
Chandmari – Milanpur, Guwahati-781021,
Assam
INDIA
Tel. : +91 361-2651593
drbarbaruah@gmail.com

Dr Susan Catherine Cork
Head of Department & Professor of
Ecosystem & Public Health
Faculty of Veterinary Medicine University
of Calgary
3280 Hospital Drive, Calgary, Alberta,
T2N 4Z6
CANADA
Tel: 403 210-6522 sccork@ucalgary.ca

Dr Gert-Jan Duives
Senior lecturer Animal Health &
Production
Department : International Food &
Agribusiness
HAS University of Applied Sciences
P.O. Box 90108
5200MA 's-Hertogenbosch
THE NETHERLANDS
Tel.: +31 8889 03600
g.duives@has.nl

Ms Barbara M. Martin
BM Martin Laboratory Consultants
2503 Eisenhower Avenue
Ames, IA 50010
UNITED STATES
Tel.: +1 515 708 5622
martin.barbara.m@gmail.com

Dr Vutha Pheng
Vice Dean of Graduate School
Faculty of Veterinary Medicine
Royal University of Agriculture
#39, St 208, Sangkat Beongraing, Khan
Donepenh, P.P.
CAMBODIA
Tel. : +855 012-697-487
vutha1@yahoo.com

Dr Willy Schauwers
Veterinary laboratory technology
consultant
Haasdonksesteenweg 40
9140 Temse
BELGIUM
willy.schauwers@skynet.be

Dr Heather Simmons
Program Manager and Education and
Outreach Theme Leader
Institute for Infectious Animal Diseases
A Department of Homeland Security
Science & Technology Center of
Excellence
Texas A&M University
1500 Research Parkway
Building B, Suite 270
College Station, TX 77843-3202
UNITED STATES
Tel: 979-862-3202
hlsimmons@ag.tamu.edu

Annex 36 (contd)

Annex I (contd)

OTHER PARTICIPANTS

Dr Terry F. McElwain

Regents Professor Emeritus
Paul G. Allen School for Global Animal Health
1352 SW Windsor St.
Oak Harbor, WA 98277
UNITED STATES
tfm@vetmed.wsu.edu

OIE HEADQUARTERS

Dr Tomoko Ishibashi

Senior Manager,
Horizontal Coordination and Special
Projects
t.ishibashi@oie.int

Dr David Sherman

Chargé de mission
Regional Activities Department
d.sherman@oie.int

MEETING OF THE OIE AD HOC GROUP ON VETERINARY PARAPROFESSIONAL

Paris, 31 July–2 August 2017

Adopted agenda

- Item 1 Welcome, introductory remarks and adoption of agenda
- Item 2 Progress report since the first meeting in November 2016
- Discussion at the subgroup on animal health and veterinary public health (21–23 February 2017)
 - Discussion at the subgroup on laboratory diagnosis (14–16 March 2017)
 - Drafting the Competency Document
- Item 3 Examination of the draft Competency Document
- Discussion and agreement on the text
 - Discussion and agreement on relevant tracks for each SOA/Competency
 - Discussion and agreement on levels for each Competency
- Item 4 Brainstorming of core curricula to develop
- Current analysis summary
 - Duration
 - Tracks
 - Strategy for initial work and future development
- Item 5 Examination of course contents based on the Competency Document
- Item 6 Others
- Report of preparation of the Regional Conference on Veterinary Paraprofessionals in Asia
 - Way forward
-

Annex 36 (contd)Annex III**[DRAFT] VPP COMPETENCY DOCUMENT****SCOPE**

The effective delivery of national veterinary services for the protection of animal and public health requires a well-trained cadre of veterinarians and veterinary paraprofessional (VPPs) working in both the public and private sectors.

The OIE supports the participation of VPPs in the delivery of national veterinary services and recognises the variety of roles that VPPs can play, including: participation in animal health field activities related to disease prevention and control; participation in veterinary public health activities such as meat inspection; and, engagement in veterinary laboratories, such as conducting diagnostic tests.

Chapter 3.4 of the OIE *Terrestrial Code* indicates that a country's veterinary legislation should provide a basis for the regulation of veterinarians and VPPs in the public interest and suggests the creation of a regulatory entity, the veterinary statutory body (VSB), to carry out that regulation. Chapter 3.4 indicates that the relevant veterinary legislation should:

- a) define the prerogatives of veterinarians and of the various categories of VPPs that are recognised by the Member Country;
- b) define the minimum initial and continuous educational requirements and competencies for veterinarians and VPPs;
- c) prescribe the conditions for recognition of the qualifications for veterinarians and VPPs;
- d) define the conditions to perform the activities of veterinary medicine/science; and
- e) identify the exceptional situations, such as epizootics, under which persons other than veterinarians can undertake activities that are normally carried out by veterinarians.

In this context, it is essential that the expected competencies of VPPs working in the areas of animal health, veterinary public health and laboratory diagnosis are established and that guidelines for core curricula are developed to ensure that graduating VPPs possess the necessary competencies for each of the tracks.

This document presents the necessary competencies recognised by OIE for the three tracks of VPPs identified – animal health, veterinary public health and laboratory diagnosis. The curricula required to instill these competencies will be presented in a separate document. As different countries may use different terms to characterize different categories of VPPs trained to similar levels, the OIE has avoided naming categories of VPPs and instead has assumed that VPPs will receive formal training to the certificate, diploma or degree level. For this reason, competencies for Community Based Animal Health Workers, who are most often trained informally for a period of several weeks, are not included in the scope of this document.

STRUCTURE OF THE DOCUMENT

To establish competencies for VPPs, the document identifies 16 key spheres of activity (SOA) in which VPPs may be involved in conducting work within the veterinary domain. For each sphere of activity, between two and four relevant competencies are also identified.

Annex 36 (contd)Annex III (contd)

In identifying the SOA and their related competencies, a number of important factors were considered. First, it was recognised that overlaps occur among the required competencies for the three different tracks of VPP activity. Second, it was noted that some competencies can be considered as basic while others are advanced. Third, it was acknowledged that the prerogatives allowed for various categories of VPPs will vary between countries depending on a variety of local considerations. Fourth, the OIE expects VPPs to be under the responsibility and direction of qualified veterinarians when conducting their work. How these issues were addressed is explained as follows.

For each of the sixteen SOA, its relevance to the three VPP tracks (laboratory diagnosis, animal health and veterinary public health) is identified in parentheses on the heading line that introduces that sphere of activity. One, two or three of the tracks may be relevant for each sphere of activity.

With regard to the different tracks, each competency is identified as being either required at the basic level or the advanced level for a particular track, reflecting the assumption that basic level competencies would be covered in a minimum core curriculum, whereas advanced levels would be developed through training beyond that. For example, a given competency might be considered required as a basic for the animal health and veterinary public health tracks, but required at an advanced level for the laboratory diagnosis track. These designations are provided in indented bullets after the description of each competency.

COUNTRY-SPECIFIC ISSUES

With regard to the responsibilities or prerogatives of VPPs in different countries, the needs of the country's Veterinary Services and the decisions of its VSB should converge to determine what activities VPPs are allowed to undertake. Consider, for example, countries with a limited number of veterinarians and large livestock populations, some of which are in remote places. For livestock owners to obtain any clinical veterinary services at all, it may be necessary for the VSB to sanction trained VPPs to provide those services in remote areas. Similarly, this document identifies expected competencies for trained VPPs that are approved to carry out ante- and post-mortem meat inspection under the overall supervision and responsibility of the Veterinary Services, but whether or not they are allowed to do so remains a policy decision of the specific country. The present document is designed to identify all the possible, reasonable activities that VPPs might be involved in and then to establish the required competencies necessary to ensure that the activities would be carried out properly. In that context, it should be understood that identifying diagnosis and treatment of livestock disease as a competency for VPPs in this document does not imply an endorsement of their right to do so, but only their competency to do so. Granting the prerogative will be the decision of each country.

With regard to veterinary paraprofessional working under the responsibility and direction of qualified veterinarians, OIE confirms and supports this expectation but also recognizes that it is the prerogative of the VSB in each country to determine the extent and nature of that responsibility and direction relative to the various activities that are sanctioned for VPPs to perform.

RELEVANT OIE DEFINITIONS

Veterinarian means a person with appropriate education, registered or licensed by the relevant veterinary statutory body of a country to practice veterinary medicine/science in that country.

Veterinary Authority means the Governmental Authority of a Member Country, comprising veterinarians, other professionals and paraprofessionals, having the responsibility and competence for ensuring or supervising the implementation of animal health and welfare measures, international veterinary certification and other standards and recommendations in the *Terrestrial Code* in the whole territory.

Veterinary domain means all the activities that are directly or indirectly related to animals, their products and by-products, which help to protect, maintain and improve the health and welfare of humans, including by means of the protection of animal health and welfare, and food safety.

Annex 36 (contd)Annex III (contd)

Veterinary para-professional means a person who, for the purposes of the *Terrestrial Code*, authorised by the veterinary statutory body to carry out certain designated tasks (dependent upon the category of veterinary para-professional) in a territory, and delegated to them under the responsibility and direction of a veterinarian. The tasks for each category of veterinary para-professional should be defined by the veterinary statutory body depending on qualifications and training, and in accordance with need.

Veterinary Services means the governmental and non-governmental organisations that implement animal health and welfare measures and other standards and recommendations in the *Terrestrial Code* and the OIE Aquatic *Animal Health Code* in the territory. The Veterinary Services are under the overall control and direction of the Veterinary Authority. Private sector organisations, veterinarians, veterinary paraprofessionals or aquatic animal health professionals are normally accredited or approved by the Veterinary Authority to deliver the delegated functions.

Veterinary statutory body means an autonomous regulatory body for veterinarians and veterinary paraprofessional.

VPP Spheres of Activity and Related Competencies

As agreed by the *ad hoc* Group, 31 July – 2 August

1. Animal and Veterinary Science

[Tracks: AH, VPH]

Animal science means the study of the biology, growth, husbandry, and production of animals under human control. Veterinary science is the art and science concerned with the health of animal and the treatment of injuries and diseases that affect them.

For this sphere of activity, animal and veterinary science, veterinary paraprofessional (VPPs) are expected to have the following competencies:

- Competency 1: VPPs shall know the fundamentals of animal science including the care, nutrition and reproduction of animal species relevant to the country and region.
 - Basic: AH, VPH
- Competency 2: VPPs shall know the fundamentals of veterinary science and be able to examine animals, assess their environment and interview animal keepers, recognize signs of health and disease, identify common infectious and non-infectious diseases, differentiate among similar diseases, evaluate injuries and *support reproduction and herd health management*.
 - Basic: AH, VPH (for VPH excluding the section in italics)
- Competency 3: VPPs shall be able to administer first aid and follow established guidelines to select, properly utilize and advise on the use of the appropriate veterinary products and procedures necessary to successfully treat, manage and/or prevent common infectious and non-infectious diseases, reproductive conditions, trauma and other emergencies of domesticated animal species.
 - Basic: AH

Annex 36 (contd)Annex III (contd)**2. Laboratory Science**

[Track: Lab]

Laboratory science means the study of methods to analyze biological materials, feed, food and environmental samples that provide information needed for the diagnosis and treatment of disease as well as detection of drug residues, monitoring the quality and safety of feed, detecting environmental contaminants, and other aspects of animal, human, and environmental health.

For this sphere of activity, laboratory science, VPPs are expected to have the following competencies:

- Competency 1: VPPs shall know the fundamentals of laboratory science.
 - Basic: Lab
- Competency 2: VPPs shall have fundamental knowledge of pathology and pathogenesis of relevant key diseases.
 - Basic : Lab
- Competency 3: VPPs shall be able to carry out appropriate assays using the available range of equipment within the various laboratory disciplines in support of animal health and production, food safety and the diagnosis of animal and zoonotic diseases in the country and region.
 - Basic: Lab
- Competency 4: VPPs shall know the fundamentals of animal production, veterinary science, and public health.
 - Advanced: Lab

3. Biosafety, Biosecurity & Occupational Health & Safety

[Tracks: Lab, AH, VPH]

Biosafety means the principles and practices for the prevention of unintentional exposure to biological materials or their accidental release.

Biosecurity means a set of management and physical measures designed to reduce the risk of the introduction, establishment and spread of animal diseases, infections or infestations to, from and within an animal population.

Occupational health and safety means all aspects of health and safety in the workplace, with a strong focus on primary prevention of hazards.³

³ Source, WHO: http://www.who.int/topics/occupational_health/en/

Annex 36 (contd)

Annex III (contd)

For this sphere of activity, biosafety, biosecurity and occupational health and safety, VPPs are expected to have the following competencies:

- Competency 1: VPPs shall know the principles of biosafety and be able to advise on preventing unintentional human or animal exposure or accidental release of biological agents and materials in laboratory, farm, processing plant, market and other settings where such risks might occur. VPPs shall conduct their duties in accordance with these principles and in compliance with relevant laws, regulations and policies.
 - Basic: Lab, AH, VPH
- Competency 2: VPPs shall know the principles and practices relating to occupational health and safety and be able to carry out their required workplace activities without endangering the health and safety of themselves or others present.
 - Basic: Lab, AH, VPH
- Competency 3: VPPs shall know the principles of biosecurity and be able to advise on reducing the risk of introduction, establishment and spread of animal diseases, infections or infestations to, from and within an animal population. VPPs shall conduct their duties in accordance with these principles and in compliance with relevant laws, regulations and policies.
 - Basic: AH, VPH
 - Advanced: Lab
- Competency 4: VPPs shall know the terminology and principles of risk analysis⁴ and hazard analysis critical control points (HACCP) and be able to observe and apply these principles in relation to minimizing the risk of spreading animal and zoonotic disease.
 - Advanced: Lab, AH, VPH

⁴ Risk analysis means the process composed of hazard identification, risk assessment, risk management and risk communication.

Annex 36 (contd)Annex III (contd)**4. Communication**

[Tracks: Lab, AH, VPH]

Communication means the knowledge, skills and practices necessary for conducting the effective exchange of information between various individual, institutional and public audiences for purposes of informing, guiding and motivating action in relation to animal health, production and welfare as well as diagnostic laboratory matters.

For this sphere of activity, communication, VPPs are expected to have the following competencies:

- Competency 1: VPPs shall know the principles of effective communication and possess the communication skills necessary to carefully listen to and be clearly understood by clients, colleagues and other stakeholders and to deliver extension services.
 - Basic: Lab, AH, VPH
- Competency 2: VPPs shall be able to use appropriate information technology to prepare reports, develop extension messages, and make public presentations.
 - Advanced : Lab, AH, VPH

5. Veterinary Legislation, Policies, Ethics and Professionalism

[Tracks: Lab, AH, VPH]

Veterinary legislation means the laws, regulations and all associated legal instruments that pertain to the veterinary domain while policies refer to the official actions taken to implement the veterinary legislation.

Veterinary ethics means a code of conduct followed to ensure impartial, independent and objective judgement, honest behaviour and integrity consistent with relevant veterinary legislation and policies.

Professionalism means the desired qualities and competencies that characterise the expected performance of veterinary paraprofessionals.

For this sphere of activity, veterinary legislation, policies, ethics and professionalism, VPPs are expected to have the following competencies:

- Competency 1: VPPs shall be able to conduct their work in keeping with the rights, responsibilities, prerogatives and obligations that pertain to VPPs under the laws regulations and policies of the country in which they work.
 - Basic: Lab, AH, VPH
- Competency 2: VPPs shall be able to cite the relevant laws, regulations and policies that provide the legal justification for any actions they are taking which may affect the rights and property of interested parties.
 - Basic: AH, VPH
 - Advanced: Lab

Annex 36 (contd)

Annex III (contd)

- Competency 3: VPPs shall act in a manner consistent with the professional and ethical standards to which VPPs are expected to adhere and understand the penalties and procedures associated with violation of those standards.

- Basic: Lab, AH, VPH

6. Use and Management of Equipment and Infrastructure [Tracks: Lab, AH, VPH]

Use and management of equipment and infrastructure means the knowledge, skills and procedures necessary for the proper and safe use, care and maintenance of equipment and infrastructure used in the course of professional activity.

For this sphere of activity, use and management of equipment and infrastructure, VPPs are expected to have the following competencies:

- Competency 1: VPPs shall know the function, operational procedures, proper and safe use of all equipment utilized during the course of their routine work.

- Basic: Lab, AH, VPH

- Competency 2: VPPs shall be able to properly maintain, clean, disinfect and store all equipment used.

- Basic: Lab, AH, VPH

- Competency 3: VPPs shall be able to detect and report routine operational malfunctions on equipment and conduct, routine repairs when necessary to keep equipment operational.

- Basic: Lab, AH, VPH

- Competency 4: VPPs shall be able to monitor and manage infrastructure, including environmental conditions and utilities, perform routine maintenance, note anomalies, and conduct simple interventions.

- Basic: Lab, AH, VPH

Annex 36 (contd)Annex III (contd)**7. Animal Handling and Animal Welfare**

[Tracks: Lab, AH, VPH]

Animal handling means the knowledge and skills to understand the behavior and needs of animals in order to manage their movement and effectively restrain them in a manner consistent with their behavior and needs while ensuring the safety and well-being of both the animal and the handler.

Animal welfare means how an animal is coping with the conditions in which it lives. An animal is in a good state of welfare if (as indicated by scientific evidence) it is healthy, comfortable, well nourished, safe, able to express innate behaviour, and if it is not suffering from unpleasant states such as pain, fear and distress.

For this sphere of activity, animal handling and animal welfare, VPPs are expected to have the following competencies:

- Competency 1: VPPs shall understand the behaviour of relevant animal species under natural and controlled environments and be competent in the use of techniques and equipment for animal handling to minimize stress and risk during management of animals and delivery of veterinary care.
 - Basic : Lab, AH, VPH
- Competency 2: VPPs shall be able to recognize signs of fear, pain, stress and discomfort in relevant animal species in situations involving housing, lairage, restraint, movement and transport and to make suitable recommendations or interventions for alleviating those adverse effects.
 - Basic: AH, VPH
 - Advanced: Lab

8. Animal Production and Agricultural Economics

[Track: AH, VPH]

Animal production means the technology and management practices applied to the keeping of animals for profit. Amongst others, it includes feeding, breeding, housing and marketing. Of great importance is the making of the financial arrangements necessary to the successful carrying out of each enterprise in the light of the market conditions for the sale of the end products.⁵ For this reason, animal production is closely linked to agriculture economics.

Agricultural economics is the applied field of economics concerned with the application of economic theory in optimising the production and distribution of animals, animal feed and animal products.

For this sphere of activity, animal production and agricultural economics, VPPs are expected to have the following competencies:

- Competency 1: VPPs shall know the basic technical and financial characteristics of the commercial and non-commercial livestock production systems present in their country and region for the relevant animal species.
 - Basic: AH, VPH

⁵ Animal Production, in Saunders Comprehensive Veterinary Dictionary, 3 ed. © 2007 Elsevier, Inc.

Annex 36 (contd)

Annex III (contd)

- Competency 2: VPPs shall know the basic agriculture economic trends, value chain and market dynamics for the various livestock production systems with which they work in order to effectively communicate with stakeholders.

- Advanced: AH, VPH

9. Specimen Collection and Sampling

[Tracks: Lab, AH, VPH]

Specimen collection and sampling means the act of collecting, identifying, properly handling and transporting tissues or materials from animals, feed, food, or the environment for the purpose of conducting analysis on them.

For this sphere of activity, specimen collection and sampling, VPPs are expected to have the following competencies:

- Competency 1: VPPs shall be able to properly collect necessary environmental, food, feed, water and animal samples for diagnostic or testing purpose according to established protocols and techniques utilizing appropriate materials and equipment.

- Basic: Lab, AH, VPH

- Competency 2: VPPs shall be able to carry out the necessary record keeping associated with sample identification, submission and tracking.

- Basic: Lab, AH, VPH

- Competency 3: VPPs shall be able to select and utilize proper packaging and shipping supplies and procedures to ensure that the safety and quality of samples is maintained and assured during transit to testing sites.

- Basic: Lab, AH, VPH

Annex 36 (contd)Annex III (contd)**10. Laboratory and Field Testing**

[Tracks: Lab, AH, VPH]

Laboratory and field testing means the performance of accepted, standardized tests on specimens, or live animals to determine the presence of chemical, physical or biological agents, or pathological changes associated with disease. Field testing is the act of conducting an assay in the field and making a determination of the test result.

For this sphere of activity, laboratory and field testing, VPPs are expected to have the following competencies:

- Competency 1a: VPPs shall be able to perform required laboratory and field assays according to the related SOPs throughout the range of laboratory disciplines and assays expected of them.
 - Basic: Lab
- Competency 1b: VPPs shall be able to perform basic field assays expected of them according to the related SOPs.
 - Basic: AH, VPH
- Competency 2: VPPs shall be able to interpret laboratory and field test results, where applicable, as well as identify and when possible, correct, non-conforming tests.
 - Basic: Lab
 - Advanced: AH, VPH

11. Laboratory Quality Management

[Track: Lab]

Laboratory quality management means the coordinated activities required to manage a laboratory with regard to quality to ensure reliable, valid, and timely results. It includes the quality system essentials⁶: personnel, equipment, purchasing & inventory, facilities & safety, process control, documents & records, information management, assessments, corrective and preventive actions, customer service, organisation, and process improvement necessary to achieve objectives and improve consistency in all activities and tasks.

For this sphere of activity, laboratory quality management, VPPs are expected to have the following competencies:

- Competency 1: VPPs shall understand quality management principles and concepts to ensure the efficient operation and quality of outputs from the laboratories where they work.
 - Basic: Lab
- Competency 2: VPPs shall be able to implement and maintain quality management system processes and procedures to ensure the efficient operation and quality of outputs from the laboratories where they work.
 - Basic: Lab

⁶ WHO, CLSI, CDC Laboratory Quality Management System Handbook, quality system essentials based on ISO 15189 and CLSI GP26-A3

Annex 36 (contd)

Annex III (contd)

12. Workflow Management

[Track: Lab, AH, VPH]

Workflow management means managing and monitoring the activities in human, physical, and financial resources to maximize efficiency of performance.

For this sphere of activity, workflow management, VPPs are expected to have the following competencies:

- Competency 1: VPPs shall be able to organize and coordinate work activities.
 - Basic: Lab, AH, VPH
- Competency 2: VPPs shall be able to manage supplies, reagents, equipment, vehicles, cold chain, consumables, financial and other necessary resources to ensure an efficient workflow.
 - Basic: Lab
 - Advanced: AH, VPH

13. Record Keeping, Data Collection and Management

[Track: Lab, AH, VPH]

Record keeping, data collection and management means the systematic collection and recording of information related to professional activities and the storage of such recorded information in a manner that makes it readily available for retrieval and analysis.

For this sphere of activity, record keeping, data collection, and management, VPPs are expected to have the following competencies:

- Competency 1: VPPs shall be able to apply the principles of data collection, record keeping, and data management to the information they gather.
 - Basic: Lab, AH, VPH
- Competency 2: VPPs shall be able to use appropriate paper-based and electronic means for the proper and systematic collection, recording, storage, retrieval, analysis and reporting of relevant information in the veterinary domain.
 - Basic: Lab
 - Advanced: AH, VPH

Annex 36 (contd)

Annex III (contd)

14. Disease Prevention and Control Programmes

[Track: Lab, AH, VPH]

Disease prevention and control programmes, whether or not approved, managed or supervised by the veterinary authority, include movement controls, vaccination, and treatment. Disease prevention and control programmes will be specific to each country or region and should comply with applicable OIE standards, as appropriate.

For this sphere of activity, disease prevention and control programmes, VPPs are expected to have the following competencies:

- Competency 1: VPPs shall be able to participate in national disease prevention and control programmes, including the reporting of notifiable diseases, *collection of basic epidemiologic field data*, disease surveillance activities and support of disease investigation and control efforts, including communication with stakeholders. [Note: Italicized portion not included in the lab track]
 - Basic: Lab, AH, VPH
- Competency 2: VPPs shall be able to apply their knowledge of the clinical and epidemiological characteristics of those infectious diseases for which programmes exist.
 - Basic: AH, VPH
- Competency 3: VPPs shall be able to apply disease control measures, including animal identification, sampling for laboratory testing, vaccination and other preventive services, treatment when appropriate, vector control, quarantine, movement control, disinfection, humane killing of animals and the proper disposal of carcasses in a manner consistent with public and environmental health.
 - Basic: AH, VPH
- Competency 4: VPPs shall understand the One Health approach and be able to work effectively within integrated teams.
 - Basic: Lab, AH, VPH

Annex 36 (contd)

Annex III (contd)

15. Veterinary Products

[Tracks: AH, VPH]

‘Veterinary products’ means drugs, insecticides/acaricides, vaccines, and biological products used or presented as suitable for use to prevent, treat, control, or eradicate animal pests or diseases; to be used to establish a veterinary diagnosis; or to restore, correct or modify organic functions in an animal or group of animals.

For this sphere of activity, veterinary products, VPPs are expected to have the following competencies:

- Competency 1: VPPs shall know the characteristics and use of the various categories of veterinary medicines and biologicals used in the country and region, the available products approved for use within each category and know the conditions for the appropriate selection of each for therapeutic or preventive purposes. They shall also know the permitted drugs, conditions, and circumstances in the country, if any, under which VPPs can prescribe and/or administer medicines.
 - Basic: AH
- Competency 2: VPPs shall know the species of animals for which each drug is approved and its proper route of administration. They shall be able to reliably calculate the correct dosage of drug, determine period, condition of administration, and properly administer it for the prescribed period and communicate adverse effects, including the development of drug resistance.
 - Basic: AH
- Competency 3: VPPs shall know the conditions for the proper storage, display and handling of approved veterinary medicines and biologicals to ensure the maintenance of their quality and efficacy, taking note especially of cold chain requirements, expiry dates, and proper disposal.
 - Basic: AH
- Competency 4: They shall be able to communicate to animal owners how the improper use of drugs can have adverse effects on public health, such as the importance of respecting drug withdrawal times and how the improper administration of antimicrobials may contribute to the development of antimicrobial resistance.
 - Basic: AH, VPH

Annex 36 (contd)Annex III (contd)**16. Food Hygiene**

[Tracks: Lab, AH, VPH]

Food hygiene means all conditions and measures necessary to ensure the safety and suitability of food of animal origin.

For this sphere of activity, food hygiene, VPPs are expected to have the following competencies:

- Competency 1: VPPs shall know the principles of food hygiene and be able to recognize when animal slaughter, processing, storage, and transport facilities are properly designed and operating according to those principles, including the application of quality management systems, so as to ensure the welfare of animals present, the hygienic quality of products produced and the safety and health of workers present.
 - Basic: AH, VPH
 - Advanced: Lab
 - Competency 2: VPPs shall be able to participate in foodborne disease investigations, including conducting interviews, accurately recording information and properly selecting and handling samples for testing.
 - Basic: Lab, AH, VPH
 - Competency 3: VPPs working in abattoirs or other slaughter facilities shall be able to carry out and monitor humane stunning and killing of slaughter animals. They also shall be able to conduct ante- and post-mortem meat inspections and reporting abnormal findings to proper authorities.
 - Basic: VPH
 - Advanced: AH
 - Competency 4: VPPs shall be able to properly inspect facilities and means of transport related to production, processing, storage and distribution of products of animal origin and to advise on improvements, to ensure compliance with regulatory requirements for food hygiene throughout the processing chain.
 - Advanced: VPH
-

Annex 36 (contd)

Annex IV

1. For each Track, how well do the VPP Spheres of Activities (SOAs) and Competencies represent the range of Veterinary Paraprofessional (VPP) responsibilities in your country?

AH/VPH Track					Laboratory Track				
<input type="checkbox"/>									
Extremely Well	Very Well	Somewhat	Slightly	Not at All	Extremely Well	Very Well	Somewhat	Slightly	Not at All

2. Please list any additional activities VPPs perform that are not covered by the attached SOA and Competencies:

AH/VPH Track	Laboratory Track

3. Please identify any SOAs and/or Competencies which are outside the scope of what VPPs do in your country, by SOA and Competency number. (For example: Competency 3 from SOA 1 should be listed as “SOA 1:C3”)

AH/VPH Track	Laboratory Track

4. How can this document assist you to improve the opportunities, quality and performance of VPPs in your country?

5. In your opinion, will this document be valuable in improving the Competencies of VPPs in your country?

<input type="checkbox"/>				
Definitely Yes	Probably Yes	I'm Not Sure	Probably Not	Definitely Not

6. What problems might arise in using this document in your country?

7. General comments and suggestions (not covered by the preceding questions):

Any additional information on existing VPP programs can be provided via email to standards.dept@oie.int



Organisation
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de la Santé
Animale

World
Organisation
for Animal
Health

Organización
Mundial
de Sanidad
Animal

Annex 37

Original: English
August 2017

OIE AD HOC GROUP ON KILLING METHODS FOR REPTILES COMMERCIALY PROCESSED FOR THEIR SKINS, MEAT AND OTHER PRODUCTS

Paris, 22–24 August 2017

1. Welcome and introduction

The OIE *ad hoc* Group on killing methods for farmed reptiles for their skins and meat (the *ad hoc* Group) met at the OIE Headquarters on 22–24 August 2017.

The members of the *ad hoc* Group and other participants taking part in the meeting are listed at Annex I.

The Director General of OIE, Dr Monique Eloit, welcomed and thanked the *ad hoc* Group on their commitment to work with the OIE on this topic. She highlighted the importance of this work and their contribution. The Director General also noted the new procedure for the nomination for election of members of the Specialist Commissions, and the call for applications that was recently published on the OIE website and that the members of the group should consider if they wished to apply.

In terms of the process for the *ad hoc* Group, the Head of the Standards Department, Ms Ann Backhouse, advised members the report of this meeting will be presented to the Terrestrial Animal Health Standards Commission (Code Commission) in September 2017. The Code Commission would review the report and the draft new chapter and decide if it was to be annexed to their report and circulated for the first round of Member Country comments. In revising the draft new chapter, Dr Leopoldo Stuardo noted the group should also consider all comments provided by the Code Commission in their last report of the February 2017 meeting.

Dr William B. Karesh, Chair of the *ad hoc* Group, welcomed the members to the meeting and thanked them for the excellent work already done through the electronic working group. All members of the group agreed that the opportunity to work on the draft new chapter electronically and through teleconference was very productive and that this initiative should be encouraged within the OIE.

2. Confirmation of the Agenda and the Terms of References

The draft agenda was adopted without modifications.

The *ad hoc* Group reviewed the Terms of Reference and considered they were adequate for the work that was before them. In respect of the scope of the work, the group agreed to include other products as reptiles in commercial processing were also used for the collection of blood and eggs. In regards to the name of the group as the title of the chapter had been modified the name of the *ad hoc* Group was also amended to reflect this.

The Terms of Reference for the *ad hoc* Group and the adopted agenda of the meeting are presented in Annex II and Annex III respectively.

Annex 37 (contd)**3. Review of draft new Chapter 7.Y. Killing methods for reptiles commercially processed for their skins, meat and other products**

Taking into account the request from the Code Commission to restructure the draft new chapter in order to harmonise it with others chapters of the *Terrestrial Code*, the *ad hoc* Group reviewed the chapter article by article. The group considered that following the scope and definitions it was more logical to start with general considerations including the source of the animals followed by selection of the stunning methods, restraint and killing methods. As requested by the Code Commission, the group also included outcome-based criteria (measureables) to support the recommendations in each section.

Regarding to the scope and title of the chapter, the *ad hoc* Group agreed to modify it to include reference to 'other products' (for example, collection of organs, blood, body parts and eggs) to clarify the recommendations in the chapter apply to the process of killing reptiles for commercially processed meat and skins and other products.

The *ad hoc* Group agreed that there was no need to repeat definitions that are already in the glossary of the *Terrestrial Code*. The group noted that in respect of the definition of 'stunning' it was appropriate to use a modified one in order to highlight that for reptiles, the reference to *slaughter* (as referenced in the glossary definition of *stunning*) is not appropriate, as *slaughter* (death by bleeding) is an unacceptable method for killing reptiles.

Regarding to the criteria for the selection of each method, the *ad hoc* Group structured each article starting with recommendations for the use of the different methods, and rather than refer to the advantages and disadvantages of each method, decided to address these within the recommendations. In addition the *ad hoc* Group inserted for each method, the outcome-based criteria (or measurables) that should be assessed to ensure that the method was appropriately applied according to the expected results.

The *ad hoc* Group agreed not to include specific behavioural parameters to measure the effectiveness of each of the killing methods as this could lead to misinterpretation due to the differences between animals and species, but included this in the article on General Considerations.

The *ad hoc* Group had a broad discussion on the use of the electrical stunning method, in particular whether or not to include specific electrical parameters. However, noting its effectiveness can be variable, depending on species anatomy and physiology and that there were also a number of external factors that could also affect its effectiveness, the group decided not to include specific electrical parameters to be used with this method. Because of the importance of this method being used correctly, the group developed general recommendations and outcome-based criteria (or measurables), that should be considered, to ensure the effectiveness of this method.

In relation to the article on the use of the captive bolt method, the *ad hoc* Group considered the effectiveness of this method and in view of the fact that a single action should cause both unconsciousness and death, it could be considered as both a method for stunning and killing animals.

Regarding to the use of a percussive blow to the head the *ad hoc* Group agreed that the recommendations should clarify how this method should be applied in order to achieve the desired result and the outcome-based criteria (measurables) that should be checked when looking for the effectiveness of the method.

Concerning the article on the use of decapitation as a killing method, the *ad hoc* Group reinforced the need to stun the animal before decapitation because reptiles remain conscious even after the decapitation.

Finally, the group discussed the particular issues associated with the use of chemical agents in relation to restraint, stunning and killing of animals. While these methods are considerate acceptable by some authors (e.g. Mader D., 2006), the use of chemical agents may not be practical or cost effective in the animal production context. It was also considered important to emphasis in the draft chapter that the use of chemicals, should be under veterinary supervision, according to national legislation and the guidance of the Competent Authority.

The draft chapter is presented as Annex IV.

4. Programme for further work after this meeting

The Code Commission will consider the draft chapter and the report of the *ad hoc* Group during its September 2017 meeting. The Code Commission will decide if the draft revised chapter will be circulated for Member Country comments and whether it will consider comments received at its February 2018 meeting or if it will request the OIE to convene another face to face meeting of the *ad hoc* Group in order to review those comments received.

5. Other business

No other new issues were proposed for discussion.

.../Appendices

**OIE AD HOC GROUP ON KILLING METHODS FOR REPTILES COMMERCIALY PROCESSED
FOR THEIR SKINS, MEAT AND OTHER PRODUCTS**

Paris, 22–24 August 2017

List of participants

MEMBERS OF THE AD HOC GROUP

Dr William B. Karesh (Chairperson)
Executive Vice-President for Health
and Policy EcoHealth Alliance
460 West 34th St., 17th Floor
New York, NY 10001
UNITED STATES OF AMERICA
Tel.: (1-212) 380 4463
karesh@ecohealthalliance.org

Dr Leisha Hewitt
Livestock Welfare
PO Box 143
Franklin
Tasmania 7113
AUSTRALIA
leisha.hewitt@gmail.com

Dr Mathias Lörtscher
Head CITES MA Switzerland
Office fédéral de la sécurité alimentaire
et des affaires vétérinaires
Schwarzenburgstrasse 155
3003 BERN
SWITZERLAND
mathias.loertscher@blv.admin.ch

Paolo Martelli
Director Veterinary Services
Ocean Park
HONG KONG
paolo.martelli@oceanpark.com.hk

Dr Christopher Middleton Foggin
(*apologies*)
Wildlife Veterinarian
Victoria Falls Wildlife Trust
ZIMBABWE
cfoggin@zol.co.zw

Dr Javier G Nevarez
Professor of Zoological Medicine
School of Veterinary Medicine-Veterinary
Clinical Sciences
Louisiana State University
Skip Bertman Dr, Baton Rouge, LA 70803
UNITED STATES OF AMERICA
Tel.: (1-225) 578 9657
jnevare@lsu.edu

Dr Slamet Raharjo, DVM., MP
(*apologies*)
Lecturer at Internal Department of
Veterinary Faculty
University of Gadjah Mada Jogjakarta
Fauna Street No. Karangmalang
Jogjakarta 55281
INDONESIA
raharjo_vet19@yahoo.com

Dr Clifford Warwick
Consultant Biologist and Medical
Scientist
Riverside House, River Lawn Road
Tonbridge, Kent TN9 1EP UK
UNITED KINGDOM
cliffordwarwick@gmail.com

OIE HEADQUARTERS

Mrs Ann Backhouse
Head of Department
Standards Department
a.backhouse@oie.int

Dr Leopoldo Stuardo
Chargé de mission
Standards Department
l.stuardo@oie.int

Dr Patricia Pozzetti
Chargé de mission
Standards Department
p.pozzetti@oie.int

**OIE AD HOC GROUP ON KILLING METHODS FOR REPTILES COMMERCIALY PROCESSED
FOR THEIR SKINS, MEAT AND OTHER PRODUCTS**

Paris, 22–24 August 2017

Terms of reference

Taking into account:

- the background history of the OIE regarding animal welfare standards;
- the discussions at the Animal Welfare Working Group and at the Wildlife Working Group;
- the request from the Member Countries.

The *ad hoc* Group is requested to review the proposed draft chapter and in doing so experts are requested to:

- focus on commercial scale slaughter of reptiles for their skin, meat and other products;
- take into account the restrictions under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), on the source of the animals and related issues; and
- cover as a priority the following species: crocodiles and snakes.

These standards must:

- be based on science (scientific references must be provided and included in the draft text);
- harmonised in their structure with the rest of the *Terrestrial Code*, including the other animal welfare and production system chapters; and
- use criteria that address the outcomes at the animal level (animal-based).

Outputs of the *ad hoc* Group:

- a report of the group together with a revised draft chapter will be provided to the Code Commission and the Wildlife Working Group for their consideration.
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**OIE AD HOC GROUP KILLING METHODS FOR REPTILES COMMERCIALY PROCESSED
FOR THEIR SKINS, MEAT AND OTHER PRODUCTS**

Paris, 22–24 August 2017

Adopted agenda

1. Welcome and introduction.
2. Confirmation of the Agenda and the Terms of References for the Group.
3. Review of the draft Chapter 7.Y. Killing methods for reptiles commercially processed for their skins and meat, presented at the February 2017 Code Commission meeting, and amend text as appropriate based on the Code Commission recommendations.
3. Other business.
4. Draft a report of the *ad hoc* Group meeting.
5. Programme for further work after this meeting

Annex 37 (contd)

Annex IV

[Note: this Annex has been replaced by Annex 27 to the report of the meeting of the OIE Terrestrial Animal Health Standards Commission which was held on 18–29 September 2017.]



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Health

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Mundial
de Sanidad
Animal

Annex 38

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November 2016

OIE AD HOC GROUP ON ANIMAL WELFARE AND LAYING HENS PRODUCTION SYSTEMS

Paris, 21–23 November 2016

The OIE *ad hoc* Group on animal welfare and laying hens production systems (the *ad hoc* Group) met for the first time at the OIE Headquarters on 21–23 November 2016.

The members of the *ad hoc* Group and other participants at the meeting are listed at [Appendix I](#). The adopted Agenda is at [Appendix II](#).

1. Welcome and introduction

Dr Matthew Stone, Deputy Director General of International Standards and Science of the OIE, welcomed all members and thanked them for their agreement to work with the OIE on this important topic. Dr Stone explained the work developed by the OIE in the area of animal welfare recommendations relevant to livestock production systems and OIE Member Countries will take a strong interest in this work.

While developing the chapter the varying conditions that exist in 180 OIE Member Countries should be taken into account to ensure sufficient flexibility to make implementation feasible for Members to the greatest extent possible.

The report of the meeting will be presented for consideration by the Terrestrial Animal Health Standards Commission (the Code Commission), at their February 2017 meeting. The publication of the report will take place after the Code Commission meeting, in early March 2017.

Dr Stone drew the attention of members to one of the discussion papers, the report of the first meeting of the *ad hoc* Group on animal welfare and livestock production systems (Paris, 8–10 April 2008) in which three key elements influencing animal welfare are described, i.e. animal health, environment and management. Dr Stone also indicated the importance of completing the chapters related to animal welfare standards, in view of the adoption of the new ISO Technical Specification 34700.

2. Confirmation of the Terms of Reference (ToR)

Dr Leopoldo Stuardo explained that the ToR are based on the discussion paper prepared by the OIE Animal Welfare Working Group (AWWG) and the report of the *ad hoc* Group on animal welfare and livestock production systems. The latter report includes a list of elements to be addressed in OIE guidelines on animal welfare in livestock production systems. Dr Stuardo advised the *ad hoc* Group that it is important to keep in mind that the OIE standards are directed fundamentally towards the Veterinary Services.

Annex 38 (contd)

The Group agreed to the scope of the new chapter and stressed the need to clarify the different production systems in order to not create confusion, for example by mixing up extensive production systems with organic production systems.

The Group agreed that the chapter should include recommendations starting from pullets through to mature laying hens. In addition, the Group discussed the existing problems with the slaughter and disposal of end of lays (spent) hens at the end of the production process.

Finally, during the discussion of the ToR, the *ad hoc* Group considered and agreed that breeding was beyond its scope for the development of the new chapter. There are unique practices related to breeding that differ considerably from those in pullet and laying hen production. It is the view of the Group that a separate chapter on chicken breeding, or perhaps poultry breeding, would be a more effective approach to develop applicable standards for the breeding and hatchery industries. The *ad hoc* Group adopted the modified ToR according to their discussion (see Appendix III).

3. Introduction of members

Members introduced themselves and summarised their fields of expertise and their current areas of work and research.

4. Discussion of working documents and other relevant documents

The *ad hoc* Group noted the documents sent by the OIE Headquarters and some documents sent by some of the Members. The *ad hoc* Group reviewed those with references relevant to the development of the recommendations.

5. Development of draft standards

The *ad hoc* Group discussed and agreed to continue using outcome-based criteria or measurables as good indicators of animal welfare, rather than indicate input design criteria because they reflect the complex interaction of multiple design inputs. Dr Stuardo mentioned that to better understand these concepts, the Code Commission is proposing, for comments by Member Countries, a new article in Chapter 7.1. on “Guiding principles for the use of animal-based measures”.

The *ad hoc* Group agreed to use Chapter 7.10. on “Animal welfare and broiler production systems” as the basis for development of the new chapter, modifying the format and structure, in order to improve its readability and use in practical terms.

The *ad hoc* Group discussed the way to deal with the fate of the males, and it was agreed that this topic will be covered in a future revision of this chapter so sufficient considerations on the topic can be given.

When the *ad hoc* Group discussed the recommendations they noted that aspects such as different production systems, spent hen management, feather pecking, moulting, space allowance, perching and nesting are among the main subjects to be covered by this new chapter.

A draft new chapter for the *Terrestrial Animal Health Code (Terrestrial Code)* was developed during the meeting and can be found in Annex IV.

The draft new chapter is structured along the following lines:

- a) definitions to be used for the purpose of this chapter;
- b) scope of the recommendations, including the type of production system considered;
- c) identification and brief descriptions of relevant ‘outcome-based criteria or measurables’;
- d) recommendations for measures applied to laying hens and pullets;
- e) references.

Annex 38 (contd)

6. Review and finalise report of meeting

The *ad hoc* Group agreed to complete their meeting report and draft standard by December 2016, for its submission to the February 2017 Code Commission meeting.

7. Next meeting

It was agreed that the next meeting will take place after receipt of comments on the report of the February 2017 Code Commission meeting, most probably during the second semester of 2017.

.../Appendices

Annex 38 (contd)Appendix I**OIE AD HOC GROUP ON ANIMAL WELFARE AND
LAYING HENS PRODUCTION SYSTEMS****Paris, 21–23 November 2016**

List of participants**MEMBERS OF THE AD HOC GROUP**

Dr Stefan Gunnarsson (Chair)
DVM, PhD, Associate Professor,
Diplomate ECAWBM
Senior lecturer
Dept. of Animal Environment and Health
Swedish University of Agricultural
Sciences (SLU)
P.O. Box 234,
S-532 23 Skara
SWEDEN
stefan.gunnarsson@slu.se

Dr Roberto Becerra Olmedo
Veterinarian
Technical Director
Food Solutions Team EIRL
CHILE
rbecerra@fsteam.cl

Prof. Inmaculada Estevez
Ikerbasque Research Professor
Department of Animal Production
Neiker-Tecnalia
Vitoria-Gasteiz, 01080
SPAIN
Tel.: + 34 945 121 336
iestevez@neiker.net

Mr Kevin Lovell
CEO/HUB
0861 POULTRY / 0861 768 5879
Wild Fig Office Park
1494 Cranberry Street
Honeydew Ext19
Po Box 1202, Honeydew, 2040
SOUTH AFRICA
Kevin@sapoultry.co.za

Dr Suzanne T. Millman
Associate Professor, Animal Welfare
Veterinary Diagnostic & Production
Animal Medicine/Biomedical Sciences
Lloyd Veterinary Medical Center #2201,
College of Veterinary Medicine,
Iowa State University, 1860 South
Riverside Drive, Ames, IA, 50011
UNITED STATES
smillman@iastate.edu

Dr Tsuyoshi Shimmura
Associate Professor
Tokyo University of Agriculture and Technology
3-8-1 Harumi-cho, Fuchu-shi
Tokyo 183-8538
JAPAN
Tel.: +81-564-55-7601
shimmura@go.tuat.ac.jp

Dr Jean-Loup Rault
Melbourne University
Level 5, 161 Barry Street
The University of Melbourne
Parkville 3010 VIC Australia
AUSTRALIA
jean-loup.rault@unimelb.edu.au

OIE HEADQUARTERS

Dr Matthew Stone
Deputy Director General
International Standards and
Science
OIE
m.stone@oie.int

Dr Leopoldo Stuardo
Chargé de mission
Standards Department
OIE
l.stuardo@oie.int

Annex 38 (contd)

Appendix II

**OIE AD HOC GROUP ON ANIMAL WELFARE AND
LAYING HENS PRODUCTION SYSTEMS**

Paris, 21–23 November 2016

Adopted agenda

1. Welcome and introduction – Dr Matthew Stone
 2. Confirmation of Terms of Reference
 3. Introduction of Members
 4. Discussion of working documents and other relevant documents
 5. Development of draft standards
 6. Review and finalise report of meeting
 7. Next meeting
-

Annex 38 (contd)Appendix III**OIE AD HOC GROUP ON ANIMAL WELFARE AND
LAYING HENS PRODUCTION SYSTEMS****Paris, 21–23 November 2016**

Terms of Reference

Taking into account:

- The background history of the OIE regarding animal welfare and production systems;
- The discussion paper on the “Development of animal welfare guidelines for production systems”, written by the AWWG in 2006;
- The recommendations of the OIE *ad hoc* Group on animal welfare and livestock production in 2008; and
- The existing animal welfare and animal health standards in the *Terrestrial Code*, particularly Chapter 7.1, Article 7.1.2. on the “Guiding Principles for animal welfare” and Article 7.1.4. on the “General Principles for the welfare of animals in livestock production”, and Chapter 6.5 on the “Prevention, detection and control of *Salmonella* in poultry”.

The *ad hoc* Group is asked:

To elaborate a draft animal welfare standard for laying hen production systems (intensive, extensive and semi intensive, to be reviewed by the *ad hoc* Group), for eventual inclusion in the *Terrestrial Code*. This standard should cover, inter alia:

- appropriate definitions and scope;
- housing;
- feeding and watering of the animals;
- environmental considerations;
- management of endemic diseases;
- management practices;
- personnel training;
- emergency management plans (e.g. disease outbreak, failure of electrical systems, fire, etc.);
- handling facilities (on farm only);
- protection from predators.

This standard must:

- be based on science (scientific references must be provided and included in the draft text);
- harmonised in their structure with the rest of the *Terrestrial Code*, including the other animal welfare and production system chapters; and
- use criteria that address the outcomes at the animal level (animal-based).

In developing these standards, the *ad hoc* Group should review relevant resource materials, including extracts from the *Terrestrial Code*, reports from the AWWG and other *ad hoc* group meetings, examples of existing practices, and the regulatory frameworks that manage animal welfare risks from all five OIE Regions. A draft document is expected after the first meeting and will be submitted to the AWWG, the Code Commission and OIE Member Countries, for comments, to be addressed by the *ad hoc* Group in a second meeting.

Annex 38 (contd)

Appendix IV

[Note: this Annex has been replaced by Annex 28 to the report of the meeting of the OIE Terrestrial Animal Health Standards Commission which was held on 18–29 September 2017.]

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