



**REPORT OF THE ELECTRONIC CONSULTATION OF AN OIE EXPERT GROUP ON
CONTAGIOUS EQUINE METRITIS¹
July-December 2019**

1. Background

In February 2019, the OIE Headquarters updated the Terrestrial Animal Health Standards Commission (Code Commission) on the work being conducted in consultation with OIE Reference Laboratory experts to review or develop provisions for the temporary movement of horses for Chapter 12.2. Contagious equine metritis and Chapter 12.7. Equine piroplasmosis. The Code Commission considered that these chapters were outdated and not aligned with the more recent disease-specific chapters in the *Terrestrial Animal Health Code* (Chapter 12.2. has not been revised since its first adoption in 1982 and Chapter 12.7. had only a minor amendment made since its adoption in 1982) and requested OIE Headquarters to evaluate the need for a comprehensive review and revision of these chapters, not just limited to the development of articles for the temporary movement of horses.

2. Process of the electronic consultation

Based on the review by the OIE Headquarters of the OIE Standards on Contagious Equine Metritis in the *Terrestrial Animal Health Code* (*Terrestrial Code*) and the *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals* (*Terrestrial Manual*), and other relevant OIE documents such as the OIE Handbook for the Management of High Health, High-Performance Horses, some critical areas were identified for which experts' advice was consulted electronically. An expert group (the Group) comprised of four members from OIE Reference Laboratories in which Dr Peter Timoney acted as chair and Dr Anthony Kettle acted as rapporteur; a representative of the Code Commission and an observer from the International Horse Sports Confederation (IHSC) participated in the electronic consultation.

The electronic consultation was conducted between July and December 2019. All experts signed the forms for undertaking of confidentiality and declaration of conflicts of interest. The declared interests were reviewed by the OIE and it was agreed that none represented a potential conflict in the revision of the chapter. The list of participants is presented in Appendix I.

Taking into consideration the large extent of the revision on the Chapter, the Group developed a new draft Chapter 12.2 (Annex II). The references to Articles in this report refer to this new draft chapter, rather than those in the existing chapter 12.2 of the Code, unless specifically stated.

3. Review of Chapter 12.2. on Contagious Equine Metritis of the *Terrestrial Code*

Article 12.2.1. General Provisions

The Group assessed the different susceptible species to be considered in the chapter and concluded that although donkeys have been infected under experimental conditions, all evidence to date suggests that horses appear to

¹ Note: This *ad hoc* Group report reflects the views of its members and may not necessarily reflect the views of the OIE. This report should be read in conjunction with the February 2020 report of the Scientific Commission for Animal Diseases because this report provides its considerations and comments. It is available at: <http://www.oie.int/en/international-standard-setting/specialists-commissions-groups/scientific-commission-reports/meetings-reports/>

be the only natural hosts for *T. equigenitalis*, therefore the disease control focus is usually the valuable horse sector².

The Group discussed a proposal to replace “infection with” with “presence of” to allow for the new provisions to apply not only to the clinical or asymptomatic infection of the mare but also to the stallion that does not experience infection *per se* with *Taylorella equigenitalis*². The bacteria does not enter the body of the stallion, remaining throughout its existence as a surface contaminant on the mucous membrane surface of the sites where it colonizes and persists, thus not meeting the definition for “infection” as stated in the glossary of the *OIE Terrestrial Code*. For the pursuit of harmonising this *Code* Chapter with other disease-specific Chapters, a clarification in the second paragraph was added to make sure that infection with *T. equigenitalis* also includes findings of *T. equigenitalis* on the genital mucous membrane surface of the stallions.

With regard to the case definition of infection with *T. equigenitalis*, three possible options were proposed in accordance with the identification methods described in the *OIE Terrestrial Manual*. It was agreed that this definition comprises the detection of antigens or genetic material with or without clinical signs. The value of serology to confirm a case of infection with *T. equigenitalis* was questioned by the Group. It was decided not to include serology in the case definition due to the lack of specificity that makes serological tests by themselves not suitable for confirming a case of infection with *T. equigenitalis*. Nevertheless, reference is made to the Complement Fixation Test (CFT) tests in the *Terrestrial Manual* Chapter on CEM as a useful adjunct to culture for screening for evidence of *T. equigenitalis* infection in mares. Consequently, reference to the use of serological surveillance was included in the surveillance article of the newly drafted Chapter. For the purpose of the *Terrestrial Code*, the incubation period in mares was established as 14 days, covering the time elapsed for the onset of clinical signs. Due to the long-term persistence of *T. equigenitalis*, the Group concluded that the infective period was lifelong.

The Group also updated and aligned the definition of temporary importation with Chapter 4.17 (High Health-High Status Horses), emphasizing that it excludes importation for breeding purposes.

Article 12.2.2. Safe commodities

A new article on safe commodities was drafted by the Group. The main topic of discussion was the inclusion of geldings as safe commodities, but it was finally decided not to include geldings as safe commodities. The arguments of this discussion are better explained in the Article 12.2.5 on ‘Recommendations for the importation of stallions or mares’ (see below).

Article 12.2.3. Establishment free from infection with *T. equigenitalis*

The conditions to achieve country freedom and establishment freedom were assessed. Due to the epidemiologic characteristics of the disease (stallions as asymptomatic carriers, life-long infective period), it was concluded that a country or zone cannot declare freedom from infection with *T. equigenitalis* unless all horses were tested. Thus, it was agreed to set up provisions only for establishment freedom.

The Group decided that 10 years of notifiability and 2 years of absence of infection demonstration would be appropriate periods according to the experience from the experts and in line with the timeframes for other reproductive diseases in the *OIE Terrestrial Code*.

The Group discussed the possibility of implementing a stamping out policy or treatment of infected animals and concluded that as treatment is available, stamping out policy would not apply. However, it was emphasized that the recovery of the free status of the establishment should only be considered on the basis of tests with negative results after treatment.

The number and the timeframe for tests to claim an establishment free from CEM were discussed and provisions were included in this Article, in accordance with the Chapter 3.5.2 of the *OIE Terrestrial Manual*. The testing

² Iowa State University / USDA APHIS. (2015, December). cfsph.iastate.edu. Retrieved from http://www.cfsph.iastate.edu/Factsheets/pdfs/contagious_equine_metritis.pdf

protocol for horses was proposed based on references provided by Dr Peter Timoney^{3,4}. It was emphasized that horses must not have undergone antibiotics treatment before the sampling.

Provisions for testing stored semen were established as a requisite for establishment freedom.

Specific provisions were also set up for the maintenance and the recovery of free status.

Article 12.2.4. Recommendations for the importation of stallions or mares

Provisions for this Article are included in the Articles 12.2.2 and 12.2.3 of the current Chapter on CEM. OIE Secretariat considered that the provisions in the current Chapter were no longer fit for purpose. With the advice of the Group, new provisions were drafted.

The Group considered whether geldings and foals are a risk, based on published literature^{5,6,7}. The Group discussed the potential role that geldings might play in the epidemiology of CEM. Considering that some studies found geldings to be carriers of *T. equigenitalis*, one expert's opinion was that provisions for the importation of geldings should be included in this article. On the other hand, there were reservations on listing geldings with stallions and mares which have been confirmed as capable of long-term carriage of *T. equigenitalis* and which present a significant risk of transmission of the infection. A concern was expressed that the inclusion of geldings with stallions and mares would imply they represent a significant risk in the epidemiology of CEM, which would undoubtedly have a significant impact on current import requirements. On the other hand, not including geldings in this article or including them in the article on safe commodities could be interpreted as indicating they represent zero risk, when in fact that is not necessarily the case since there is no available evidence on how long this bacterium can persist on the external genitalia of the gelding or the likelihood of transmission from geldings to other horses by natural or iatrogenic means. The Group agreed that it should be left to the importing country or establishment to decide whether it is necessary or not to apply measures for mitigation of the risk associated with importing equids other than mares and stallions, based on the application of the SPS principle of appropriate level of protection from risk, without necessarily encouraging this by stating requirements in this chapter nor disallowing it by noting geldings as a safe commodity.

Article 12.2.5. Recommendations for the temporary importation of horses

As presented in the general provisions, for the purposes of this chapter, a temporary importation refers to the introduction of a horse in a country or zone, for competition or cultural events excluding breeding, for a defined period of time during which the risk of transmission of the infection is mitigated through specific measures under the supervision of the Veterinary Authority.

The Group drafted recommendations for the temporary importation of horses based on current provisions of the *Terrestrial Code* and *Terrestrial Manual*, the recommendations in the OIE Guidelines for the management of HHP horses, and other information available. The Group considered and agreed to recommend measures to be applied before the exportation by the Veterinary Authority of the exporting country, as well as measures to be implemented to mitigate the risk of transmission of the infection during transport and temporary stay.

³ Erdman, Matthew M., et al. "Diagnostic and epidemiologic analysis of the 2008–2010 investigation of a multi-year outbreak of contagious equine metritis in the United States." *Preventive veterinary medicine*, **101**, 3-4 (2011): 219-228.

⁴ Importation of Horses from Contagious Equine Metritis-Affected Countries. USA Department of Agriculture. Animal and Plant Health Inspection Service. 9 CFR Part 93, Docket No. APHIS–2008–0112, RIN 0579–AD31. Federal Register /Vol. 78, No. 28 /Monday, February 11, 2013 /Rules and Regulations

⁵ May CE, Guthrie AJ, Keys B, Joone C, Monyai, M and Schulman ML (2016) PCR- based National surveillance programme to determine the distribution and prevalence of *Taylorella equigenitalis* in South African horses. *Eq. vet. J.*, **48** (3): 307-311.

⁶ May CE, Guthrie AJ and Schulman ML (2016) Addition of an intramammary antimicrobial formulation markedly decreased the intervals to elimination of *Taylorella equigenitalis* in a carrier mare and gelding. 10th International Conference on Equine Infectious Diseases, Buenos Aires, Argentina, 4-8 Apr 2016, *Jnl Eq Vet Sci*, **39**: S62

⁷ Timoney & Powell, 1982, The Isolation of Contagious Equine Metritis Organism from Colts and Fillies in the United Kingdom and Ireland, *Vet. Rec.*, **111**:478-487

Articles 12.2.6. Recommendations for the importation of semen of horses

The provisions for the importation of semen of horses were drafted using the same approach of the Article 12.9.4 item 5 b (Chapter on Equine viral arteritis). The Group discussed semen testing in lieu of stallion testing. It was concluded that it would be preferable to test the donor stallion rather than its semen, but still recommendations for testing semen prior to importation were drafted taking into consideration that there are circumstances when semen is the only specimen available for testing (e.g. situations where the donor stallion has died and his cryo-preserved semen was collected over a period of time prior to his death). For screening semen, it was suggested using a combination of culture and PCR. At the same time, it was explained that the need to test two samples of semen is to cover the possibility that the donor stallion may have been exposed to *T. equigenitalis* close to the date of processing its semen in which instance the bacterium may escape detection but semen could still be infective. In such situation, a second semen sample from the stallion 15-30 days after the first collection should provide a positive result.

Article 12.2.7. Recommendations for the importation of oocytes or embryos of horses

The Group discussed the relevance of establishing provisions for the importation of oocytes or embryos of horses. In the absence of studies and current evidence on the risk of transmission of the infection through contaminated oocytes and embryos, and even in the presence of antibiotics in the semen extender, the Group concluded that it was important that the appropriate background history and management of oocyte donor mares be stated as laid out in this article. The Group emphasized that the conditions specified are entirely appropriate and need to be included in this draft chapter.

Article 12.2.8. Surveillance

The Group also emphasized the importance and relevance of elaborating the provisions and guidance for establishments that would seek to promote their freedom from CEM as well as for countries where the disease is endemic. Following the structure of the article for surveillance in other disease chapters, four (4) points were considered: General principles of surveillance, clinical surveillance, agent surveillance, and serological surveillance. These points emphasize the value of increasing awareness of CEM and the need for ensuring that a country has an appropriate disease investigation and diagnostic testing structure in place to detect this infection, while in particular, clinical surveillance and agent surveillance are crucial to furthering the understanding of how to identify CEM if it occurs in a resident horse population and how to uphold freedom of that population from the disease.

While discussing that the value of including serological surveillance in the diagnostic techniques of this article would have limited practical purpose, the Group noted that serological surveillance is included in the *Terrestrial Manual*. The Group agreed to include this point while mentioning that is not the preferred strategy for detecting the presence of *T. equigenitalis*.

The Group discussed the need to include provisions for agent surveillance in stored semen. The Group discussed the importance of elaborating additional provisions for screening semen as another point for agent surveillance in addition to the recommendations for the importation of semen of horses. The Group suggested that surveillance for CEM in stored semen should be additional to any requirements on imported frozen semen.

Adoption of the report

The Group reviewed the draft report provided by the OIE Secretariat and agreed that the report captured the discussions on the electronic consultation.

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