

**REPORT OF THE ELECTRONIC CONSULTATION OF AN OIE EXPERT GROUP
ON EQUINE PIROPLASMOSIS AND CONTAGIOUS EQUINE METRITIS
May-July 2021**

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 Chapter 12.2. on Contagious equine metritis and Chapter 12.7. on Equine piroplasmosis and to consider the development of provisions for the temporary movement of horses. The Code Commission considered that these chapters were outdated and not aligned with the more recent disease-specific chapters in the *Terrestrial Animal Health Code* and requested OIE Headquarters to evaluate the need for a revision of these chapters, not just limited to the development of articles for the temporary movement of horses.

Two *ad hoc* Groups met in July and August 2019 by electronic consultation to revise these Chapters. In February 2020, the Scientific Commission for Animal Diseases (the Scientific Commission) reviewed the reports of both *ad hoc* Groups. The Scientific Commission proposed some amendments to these Chapters and forwarded the revised Chapters to the Code Commission. During its September 2020 meeting, the Code Commission reviewed the report of the electronic expert consultation, as well as the draft revised Chapters and proposed amendments for clarity and consistency with other disease specific Chapters in the *Terrestrial Code*. Both revised Chapters were circulated for Member comments between November and December 2020. Several comments were received for the Chapter on Equine Piroplasmosis (EP) and fewer for Contagious Equine Metritis (CEM).

During its February 2021 meeting, the Scientific Commission addressed the Member comments received on the CEM amended Chapter and proposed to refer one comment on this Chapter and the ones for the EP Chapter to an *ad hoc* Group of experts. The Scientific Commission agreed to address the Members comments along with the inputs of the experts at its next meeting of September 2021.

2. Process of the electronic consultation

An expert group (the Group) constituted by experts drawn from previous *ad hoc* Groups (CEM and EP) was convened in which Dr Peter Timoney was the chairperson, Dr Alf-Eckbert Füssel acted as rapporteur. Dr Baptiste Dungu represented the Scientific Commission.

The electronic consultation was conducted between May and July 2021. 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 members of this Group reviewed the comments of the OIE Members and provided inputs and a scientific rationale to support them for consideration by the OIE Specialists Commissions. The list of participants is presented in [Appendix I](#).

The reference to articles in this report are related to the newly drafted chapters on infection with *Theileria equi* and *Babesia caballi* (Equine piroplasmosis) and the Chapter on infection with *Taylorella equigenitalis* (Contagious Equine Metritis), and not to the current Chapters 12.7 and 12.2, respectively.

3. Advice requested by the Scientific Commission on the Members comments on the Chapter 12.7. on infection with *Theileria equi* and *Babesia caballi* (Equine piroplasmosis) of the *Terrestrial Code*

Article 12.7.1. General Provisions

In response to a Member comment to include the vertical transmission pathway, the Group proposed to reword the sentence proposed by the OIE Member to, as follows: ‘vertical transmission from mares to foals has also been reported’. This is because the references relate to transplacental transmission, and in order to

avoid confusion with the transovarial transmission of parasites from female ticks to their eggs. Considering that this Chapter deals not only with clinical disease but also with the “infection with *T. equi* and *B. caballi*,” the Group redrafted the introductory paragraph in Article 12.7.1 on general provisions in line with the case definition to account for asymptomatic carriers.

The Group disagreed with the Members’ proposal to add the genera of ticks *Ixodes* and *Haemaphysalis* to the list of competent vectors. The Group considered that the suggestion that *Haemaphysalis longicornis* is a potential vector of *T. equi* and *B. caballi*, is based on the findings from two studies conducted under extreme experimental conditions, but that there was no evidence to suggest that the tick stages positive for the parasite’s DNA could transmit the parasites to the next host. In addition, *T. equi* and *B. caballi* have not been detected in *H. longicornis* in tick surveys. Similarly, for the *Ixodes* genera, the assumption that it is a competent vector is based on the detection of parasites in ticks from horses that were negative for the parasite. The Group emphasised that the *Terrestrial Code* provisions may have serious implications on trade and the *Terrestrial Code* requirements should focus on the tick genera of epidemiological importance. Therefore, the Group was not in favour of including the genera of ticks *Ixodes* and *Haemaphysalis* as competent vectors until studies for vector competency under conditions which mimic natural transmission become available.

Article 12.7.3. Country or zone free from infection with *T. equi* and *B. caballi* and historical freedom

With regard to a Member’s suggestion to include provisions for historical freedom from *T. equi* or *B. caballi*, in Point 1 of Article 12.7.3. the Group is of the opinion that historical freedom would not apply to infection with *T. equi* and *B. caballi* since the vast majority of cases of infection with either organism are asymptomatic. In addition, the clinical significance of *T. equi* and *B. caballi* is not well known for equids other than horses. Furthermore, the Group agreed that country or zone free status from infection with *T. equi* and *B. caballi* should rely on an on-going active and effective surveillance program.

The Group disagreed with the request of a Member to change, for the sake of consistency with the Chapter on Theileriosis, the duration of absence of disease and the surveillance period to demonstrate evidence of infection from six to two years in Point 2 a) (i) of Article 12.7.3. The Group considered that requirements for Theileriosis would not apply to equine piroplasmiasis since *B. caballi* is transmitted transovarially, and therefore persists in ticks for more than one generation, unlike *Theileria* species. Thus, the Group suggested to maintain a period of 6 years as the duration of absence of disease and the period of surveillance necessary to demonstrate absence of infection, based on the number of tick generations that can harbor *B. caballi*, considering the 3-years lifespan of ticks and the transovarial transmission. The same period was established for the timeframe of the surveillance programme for competent vectors.

Concerning a Member comment regarding Point 2 a) (iii) of Article 12.7.3., that relying solely on surveillance for ticks alone may not provide enough confidence for freedom, the Group acknowledged that demonstration of the absence of competent vectors alone is not sufficient, and vector surveillance should be always used in conjunction with animal surveillance. Moreover, in view of the importance of iatrogenic transmission and the fact that transplacental transmission can occur, the Group concluded that a country cannot contend that absence of a vector alone confers freedom from this infection. The Group amended the Article by combining surveillance programme with the need to demonstrate of the presence or absence of competent vectors in the epidemiological situation.

The Group also agreed with a Member suggestion to amend Point 2 b) of Article 12.7.3. by adding the text “imported temporarily in accordance with Article 12.7.6,” which will allow the importing Member’s animal health status not to be affected by the temporary importation of a seropositive horse for equestrian and racing events provided the provisions in Article 12.7.6 are met. The Group considered that free countries or zones that imported seropositive equids on a temporary basis may retain their status, provided that biosecurity measures were in place in the equestrian venue and where necessary its surroundings to mitigate the risks associated with all modes of transmission. Thus, the Group reiterated that the Article on country or zone free status should address the risk of transmission instead of relying on demonstration of the absence of competent vector and proposed an amendment to Point 2 b) of Article 12.7.3.

The Group considered that the potential risk of iatrogenic transmission through importation of seropositive horses on a temporary basis can be effectively controlled through avoiding any procedure or practice that could involve exchange of blood/blood products from a seropositive equid. Consequently, the Group agreed that temporary importations should not result in the loss of a country or zone free status for equine piroplasmiasis provided that appropriate precautionary measures are taken, and the Group supported the amendment of Point 2 b) of Article 12.7.3, as proposed by the Member.

Article 12.7.5. Recommendations for the importation of equids

The Group assessed the suggestions proposed by Members in relation to the testing protocol required for importation of equids. The Group agreed that the animals should be maintained tick-free for at least 60 days prior to sampling if only serological tests are used. Alternatively, as suggested in the Member's proposal, the period to maintain animals free from ticks before sampling could be reduced to 30 days, when a combination of molecular (PCR) and serological tests are used. The latter would increase the sensitivity of the test and is also in line with the recommendations of the Biological Standards Commission (BSC): 'a combination of PCR and serological tests is essential to determine whether an animal is free from infection.' The Group was of the opinion that both options should be included in the *Terrestrial Code* Chapter.

The Group did not agree to include an item in Point 2 b) of Article 12.7.5 related to requirements for never previously returned a positive test. The Group acknowledged that infected animals may remain carriers for a prolonged period, nevertheless, self-clearance in the absence of reinfection has been reported for *B. caballi*, and the clearance of *B. caballi* and *T. equi* after repeated treatment was reported^{1, 2}. The Group clarified that even after parasite clearance, the animals remain seropositive for several months. Therefore, if an animal that was tested positive previously is still infected, such infection would be detected by serological tests. Furthermore, the Group considered that this proposal would be only applicable to animals that underwent a previous diagnostic testing, and it would be difficult to have adequate evidence of compliance with previous treatment and to certify for such treatment.

The Group supported a Member proposal on the inclusion of a provision in Point 2 b) of Article 12.7.5 to account for iatrogenic transmission, as it should be prevented before exportation, during the same period where the animals are maintained free from ticks.

Article 12.7.9. Surveillance strategies

The Group disagreed with the Member comment that an active surveillance programme is not justifiable for countries or zones with naïve equid populations. The Group did not support the proposed deletion of the text related to active surveillance. It should be taken into account that equids are always kept in distinct risk groups and an active animal surveillance program is an essential component of equine piroplasmiasis surveillance due to the high percentage of subclinical cases even in a naïve population.

The Group also did not agree with the Member proposal to delete Point 5 of Article 12.7.9 on vector surveillance. Vector surveillance is an essential component in surveillance for a vector borne disease and it complements animal surveillance since animal surveillance only records the situation in the past, while knowledge on vectors also adds an element of prediction. Furthermore, the objective of vector surveillance is not only to demonstrate the absence of competent tick vectors for declaring freedom, but also to define areas with low, medium, and high risk of infection with *T. equi* and *B. caballi*.

¹ Grause et al., 2013: Efficacy of imidocarb dipropionate in eliminating *Theileria equi* from experimentally infected horses. *Vet. J.* 2013 196: 541-546;

² Schwint et al., 2009: Imidocarb dipropionate clears persistent *Babesia caballi* infection with elimination of transmission potential. *Antimicrob. Agents Chemother.* 53: 4327-4332

4. Advice requested by the Scientific Commission on the inclusion of recommendations for country or zone freedom from infection with *T. equigenitalis* in the revised Chapter 12.2. of the *Terrestrial Code*

At its February 2021 meeting the Scientific Commission was consulted on a comment received on the revised Chapter 12.2. infection with *Taylorella equigenitalis* (Contagious Equine Metritis) circulated in the Code Commission September 2020 report. To this end, the Scientific Commission requested further expert advice on the feasibility of developing draft recommendations for historical freedom, and country or zone freedom from infection with *T. equigenitalis* without testing all stallions as requested by a Member.

Due to the epidemiologic characteristics of the disease (stallions as asymptomatic carriers, life-long infective period), the Group considered that defining provisions for country or zone freedom from *T. equigenitalis* in the Chapter, though not impossible, would establish strict requirements that would be logistically and economically difficult to achieve for most Members. The Group also emphasised that the infection with *T. equigenitalis* is a concern mainly to the horse industry and that it is manageable at a small scale, as at the *establishment* level. The feasibility to establish provisions for *compartment* freedom was also assessed, but the Group considered the difficulties to ensure the permanent separation based on horse breeds or subpopulations (*i.e.*, interaction between thoroughbred and warmblood horses) and concluded that it would be more pragmatic to define only provisions for *establishment* freedom in the Chapter, as currently proposed in the revised Chapter. Notwithstanding, the Group formulated provisions for country or zone freedom. The Group concluded that the decision whether to include or not this Article in Chapter 12.2., would be up to the respective OIE Specialist Commissions.

The Group disagreed with the Member proposal to include specific provisions for historical freedom in addition to country or zone freedom. The Group considered that the provisions of Article 1.4.6 of the *Terrestrial Code* would be appropriate in the absence of specific recommendations, this would apply for the historical freedom from *T. equigenitalis*. Based on this, the Group noted that if a Member wishes to submit a self-declaration to the OIE for publication based on historical freedom from infection with *T. equigenitalis*, it should provide documented evidence that the infection has been absent for at least the past 25 years, and that it is not known to be established in wild and feral equids in the country.

The Group noted that the Member comment also questioned that, in the absence of specific recommendations for recommendations for country or zone freedom from infection with *T. equigenitalis*, the disease would not meet the criteria for listing under Article 1.2.2 of the *Terrestrial Code* that establishes that "...at least one country is free or approaching country freedom." In this regard, the Group expressed its strong disagreement with a potential consideration to delist this disease.

OIE EXPERT GROUP
ON EQUINE PIROPLASMOSIS AND CONTAGIOUS EQUINE METRITIS
May- July 2021

List of Participants

DISEASE EXPERTS

Alf-Eckbert Füssel (rapporteur)
Until 30.6.2021 European Commission
Directorate-General for Health and Food
Safety (DG SANTE), Brussels/BELGIUM

Peter Timoney (chair)
Dept. of Veterinary Science
UNITED STATES OF AMERICA

Anthony Keetle
Executive Director at Equine International
Consultancy, AUSTRALIA

Donald Knowles
Animal Diseases Research Unit
(USDA/ARS), UNITED STATES OF
AMERICA
invited but could not attend

Ian Mawhinney
OIE reference lab for
Contagious Equine Metritis
Animal and Plant Health
Suffolk, UNITED KINGDOM
invited but could not attend

Naoaki Yokoyama
OIE Reference Lab-National Research
Center for Protozoan Diseases,
Obihiro University of Agriculture and
Veterinary Medicine, JAPAN

Martin Schulman
University of Pretoria,
Pretoria, SOUTH AFRICA

REPRESENTATIVE OF THE SCIENTIFIC COMMISSION FOR ANIMAL DISEASES

Baptiste Dungu
CEO – Onderstepoort Biological Products
SOUTH AFRICA

OIE HEADQUARTERS

Neo Mapitse
Head Status Department
75017 Paris
FRANCE
Disease.status@oie.int

Mauro Meske
Status Department Project Officer
75017 Paris, FRANCE
Disease.status@oie.int