

## PE1662/F

Joint submission of 30 October 2017 from the British Veterinary Association, British Small Animal Veterinary Association and the Veterinary Public Health Association

- 1) BVA is the national representative body for the veterinary profession in the United Kingdom and has over 16,000 members. Our primary aim is to represent, support and champion the interests of the veterinary profession in this country, and we therefore take a keen interest in all issues affecting the profession, including animal health and welfare, public health, regulatory issues and employment matters.
- 2) BVA's Scottish Branch brings together representatives of the BVA's territorial and specialist divisions, government, academic institutions and research organisations in Scotland. The Branch advises BVA on the consensus view of Scottish members on Scottish and United Kingdom issues.
- 3) The British Small Animal Veterinary Association (BSAVA) exists to promote excellence in small animal practice through education and science and is the largest specialist division of BVA representing over 10,000 members.
- 4) The Veterinary Public Health Association (VPHA) is a division of BVA and is committed to the protection of the consumer and the environment as well as to the promotion of animal welfare. VPHA currently has over 300 members many of whom work as Official Veterinarians in slaughterhouses dealing with both public health and animal welfare issues.
- 5) In order to effectively tackle Lyme Disease the veterinary profession, medical profession, animal keepers and pet owners, Government, local authorities, land owners and other relevant stakeholders must work collaboratively under a 'One Health' agenda to raise awareness of how to prevent the transmission of Lyme Disease and improve the testing and treatment of this vector-borne disease.
- 6) We welcome the opportunity to comment on the action called for in the petition, particularly with regard to the veterinary profession's role in working collaboratively with other stakeholders to raise awareness of the prevention of vector-borne diseases and contributing to the surveillance of ticks to better understand the geographical and seasonal prevalence of Lyme Disease.
- 7) Prevention and responsible ownership/animal-keeping  
We recognise that there are a number of subspecies of *Borrelia burgdorferi*, each adapted to a different type of wildlife species. Sheep and deer are often the natural reservoir for *Borrelia burgdorferi* and the veterinary profession has a role to play in promoting controls in these species to reduce the prevalence of Lyme Disease.

In the UK, it is most commonplace for animals to become infected following a bite from an infected nymph or adult tick of the species *Ixodes ricinus*, usually in high vegetated areas where ticks are known to have a higher prevalence.<sup>1</sup> A tick must be attached for at least 16-24 hours before pathogen transmission to a new host occurs.<sup>2</sup>

- 8) For sheep in areas of high tick prevalence acaricide treatment is used with the intention of preventing louping-ill virus, a tick transmitted viral disease, which can have a depressive effect on overall tick numbers in sheep. However, it should be recognised that there are increasing concerns regarding acaricide resistance. As deer are known as a chief tick multiplier and translocator in these ecosystems, culling and secure fencing are employed in areas where high tick prevalence amongst deer is a concern.
- 9) In terms of companion animals, we support the prophylactic use of veterinary recommended tick treatments and tick repellents in pets (tick repellents are also very effective for humans), and encourage owners to have their pets regularly treated at intervals as advised by their veterinary surgeon. The World Small Animal Veterinary Association (WSAVA) Vaccination Guidelines also recommend that vaccination against Lyme Disease should only be given to dogs with a known high risk of exposure to Lyme Disease, considering it to be a non-core vaccine.<sup>3</sup> This vaccine is intended to reduce transmission of *Borrelia* from the tick to the dog and reduce disease incursion in dogs.

It is important to note that the American College of Veterinary Internal Medicine (ACVIM) Small Animal Consensus Statement on Lyme Disease in Dogs: Diagnosis, Treatment, and Prevention consensus statement<sup>4</sup> and the European Scientific Counsel Companion Animal Parasites “ESCCAP Guideline 5: Control of Vector-Borne Diseases in Dogs and Cats”<sup>5</sup> express reservations as to reliance on this vaccine for control of Lyme Disease. Likewise, the NOAH Compendium data sheet for Merilym (vaccine against *Borrelia spp*) states under ‘Clinical Particulars’:

*Reduction of transmission of Borrelia from the tick to the host has not been quantified, and no correlation has been established between a specific level of antibodies and reduction of Borrelia transmission. The efficacy of the*

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<sup>1</sup> BSAVA (October 2016) ‘Infectious Diseases Fact Sheet: Lyme Disease’. Available at: [https://www.bsava.com/Portals/0/resources/documents/lyme-disease\\_final-1116.pdf?ver=2016-11-30-094233-120](https://www.bsava.com/Portals/0/resources/documents/lyme-disease_final-1116.pdf?ver=2016-11-30-094233-120)

<sup>2</sup> Ibid.

<sup>3</sup> Day et al. (2016) WSAVA: *Guidelines for the vaccination of dogs and cats*. Available at : <http://www.wsava.org/sites/default/files/WSAVA%20Vaccination%20Guidelines%202015%20Full%20Version.pdf>

<sup>4</sup> <http://onlinelibrary.wiley.com/doi/10.1111/j.1939-1676.2006.tb02880.x/pdf> Small Animal Consensus Statement on Lyme Disease in Dogs: Diagnosis, Treatment, and Prevention consensus statement’ Available at : <http://onlinelibrary.wiley.com/doi/10.1111/j.1939-1676.2006.tb02880.x/pdf>

<sup>5</sup> European Scientific Counsel Companion Animal Parasites (2012) ‘ESCCAP Guideline 5: Control of Vector-Borne Diseases in Dogs and Cats’ Available at: [http://www.esccap.org/uploads/docs/ih38c2d6\\_ESCCAP\\_Guidelines\\_GL5\\_01Oct2012.pdf](http://www.esccap.org/uploads/docs/ih38c2d6_ESCCAP_Guidelines_GL5_01Oct2012.pdf)

*vaccine against an infection that leads to the development of clinical disease has not been studied.*<sup>6</sup>

With this in mind, and due to the fact that the vaccine and reduction of *Borrelia* transmission has only been investigated under experimental conditions<sup>7</sup>, we would welcome further research into its effectiveness in controlling transmission of *Borrelia* in dogs.

- 10) As a profession, we advise that owners always thoroughly examine their pets and themselves after walks, particularly when their pet could have been exposed to ticks in woodland, long grass, or highly vegetated areas where there is a known higher prevalence of ticks. If a tick is found on the body of a pet it should be removed completely using a commercially available tick-remover, even if it is already dead (the use of prophylactic tick treatments will work to kill ticks that are in direct contact with a pet's skin). If owners have any concerns about their pet or how to remove a tick correctly they should contact their vet immediately. We would also advise that an owner should visit a healthcare professional if they believe they may have been bitten.

#### 11) Pet Travel Scheme

Further, we note that the removal of the requirement for tick treatment under the Pet Travel Scheme has increased the risk of tick-borne diseases entering the UK. This includes increasing the risk of Lyme Disease, as well as other vector-borne diseases *leishmaniosis*, *ehrlichiosis* and *babesiosis*, which are also zoonotic and so present a risk to public health as well as posing a significant welfare impact on an immunologically naïve population of animals.

This must be considered alongside the financial and emotional impact of dealing with potential treatment for these diseases. We support the re-introduction of tick treatment before entering the UK as a measure to mitigate the risk from tick-borne disease and reduce the rising prevalence of Lyme Disease in the UK.

#### 12) The responsibility of the veterinary profession

The '[Big Tick Project](#)', an initiative from the University of Bristol, conducted a veterinary study of ticks and tick-borne disease and has developed a '[UK Tick Threat Map](#)' to allow vets and members of public to assess their risk level of their local area.

- 13) We would encourage members of the veterinary profession to continue submit health and disease monitoring data from their consultations with clients who present animals with ticks to similar surveillance programmes such as [SAVSNET](#). Contributing to the collection of this data will enable both the veterinary and medical profession, as well as pet owners and members of the public, to understand more about the geographical and seasonal disease risk of Lyme Disease and other vector-borne diseases in Scotland and the

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<sup>6</sup> NOAH Compendium. *Merilym 3 Suspension Injection for Dogs*. Available at: <http://www.noahcompendium.co.uk/?id=-453793>

<sup>7</sup> Rosenbaugh, Deborah & R. Rissi, Daniel & M. Krimer, Paula. (2016). Demonstration of the ability of a canine Lyme vaccine to reduce the incidence of histological synovial lesions following experimentally-induced canine Lyme borreliosis. *Veterinary Immunology and Immunopathology*. 180. 29-33. 10.1016/j.vetimm.2016.08.014.

rest of the UK.

**14) Public information and education campaign**

Research conducted in 2015 suggests that only 47 per cent of dog owners surveyed know that ticks can transmit diseases to both dogs and humans, whilst over half (54 per cent) of dog owners don't know that Lyme disease affects both dogs and humans.<sup>8</sup> With these figures in mind, we would support a public information campaign that takes a joined-up 'One Health' approach to promoting awareness of Lyme Disease, areas of high disease risk, how to prevent Lyme Disease and how to navigate different care pathways, both veterinary and medical, if someone suspects a tick bite on themselves or their animal. We believe any information campaign should be supported by relevant stakeholders spanning the veterinary profession, the medical profession and relevant representative bodies within this, representative organisations of rural workers, Government, local authorities and land owners.

**15)** We would encourage the Scottish Government to explore replicating and building upon the proactive efforts of Public Health England in educating the wider public to be tick aware through easily digestible fact sheets and patient information<sup>9</sup>, as well as encouraging the general public to contribute to tick surveillance through a Tick Surveillance Scheme.

**16)** We recognise that as part of this the veterinary profession and its relevant professional associations have a role to play in educating pet owners on how to prevent exposure of both owners and their pets to ticks, encouraging the uptake of regular preventative tick treatment for pets at the correct intervals, as well as how to access relevant veterinary support if pets have been bitten by ticks. Likewise, as representative bodies for the veterinary profession we have a role to play in encouraging members of the veterinary profession to participate in relevant surveillance schemes and advocating the sharing of this data between veterinary and medical scientists to better understand the geographical and seasonal disease risk of Lyme Disease.

**17)** We would also support the targeted education of those working closely with sheep to standardise the quality, quantity and frequency of acaricide treatment applications and would recommend any keeper who is unsure about the correct intervals at which to apply this treatment to consult with their veterinary surgeon. In addition, we would welcome the replication of existing local and independent initiatives dispensing tick removal hooks and information on how to prevent Lyme Disease and other tick-borne diseases to rural workers and animal keepers on a larger, regional or national scale.

**18) Risk Assessment**

We would welcome further epidemiological risk assessment of Lyme Disease in both humans and animals in order to better inform targeted veterinary interventions and targeted education on prevention for the wider public and

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<sup>8</sup> University of Bristol (2016) 'Big Tick Project to track rising threat of Lyme disease'. Available at: <http://www.bristol.ac.uk/news/2015/april/big-tick-project.html>

<sup>9</sup> Public Health England. 'Ticks and your health: Information about tick bite risks and Prevention' Available at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/552740/Ticksandyourhealthinfoabouttickbites.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/552740/Ticksandyourhealthinfoabouttickbites.pdf)

those working in high-risk areas. In terms of humans, it would be useful to assess which populations (ie. rural/farming communities or urban city dwellers visiting rural areas) are most commonly infected with Lyme Disease in order to successfully target education and improve public health outcomes. Likewise, with regard to animal health, further overall assessment of the epidemiology of *Ixodes ricinus* in sheep and wildlife species as maintenance hosts of ticks would be useful in providing the up-to-date data on the seroprevalence of Lyme Disease. This will enable the risk-based prevention and management of tick-borne diseases in these species, as well as targeted education on the prevention of Lyme Disease directed towards keepers of relevant host species.

Of particular interest in this area is a recent SAVSNET study, which highlights the potential of the surveillance of ticks through companion animal electronic health records<sup>10</sup> as a methodology that could be used to provide data to inform veterinary and public health messaging regarding tick, and tick-borne disease, awareness.

#### 19) Concluding remarks

The veterinary profession has a clear role to play in raising awareness of the prevention of Lyme Disease amongst pet owners through prophylactic tick treatment, vaccination and responsible ownership. In addition, we strongly support surveillance reporting on ticks amongst the veterinary professions to improve understanding of the geographical and seasonal prevalence of Lyme Disease.

We believe there is a need for further research into the effectiveness of the Lyme disease vaccine in controlling transmission of *Borrelia* in dogs, as well as further epidemiological risk assessment, in both humans and animals, to inform interventions, disease controls and targeted education.

We would very much welcome the opportunity to contribute to a 'One Health' focussed information campaign in conjunction with our colleagues in human health and other relevant stakeholders to ensure that members of the public and rural workers spending prolonged periods of time in high-risk environments are equipped with the relevant knowledge to protect themselves and their animals from Lyme Disease.

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<sup>10</sup> ULLOCH, J., MCGINLEY, L., SÁNCHEZ-VIZCAÍNO, F., MEDLOCK, J., & RADFORD, A. (2017). The passive surveillance of ticks using companion animal electronic health records. *Epidemiology and Infection*, 145(10), 2020-2029. Available at: <https://www.cambridge.org/core/journals/epidemiology-and-infection/article/passive-surveillance-of-ticks-using-companion-animal-electronic-health-records/9753C56C9AC3EE2D499C5CDF12A8D98D>