

BVA policy position on the use of electric containment fences in livestock and horses

Introduction

Under the UK Animal Welfare Acts humans responsible for animals must ensure that the animals under their care are protected from pain, suffering, injury and disease. This includes protecting animals from pain or suffering inflicted with inappropriate and aversive training methods, containment systems or fences.

With this in mind, it is important to highlight that poorly-designed containment systems or fencing of any kind may lead to negative health and welfare outcomes for animals (both livestock and wildlife) due to potential entanglement. We therefore encourage careful selection, design and maintenance of any fencing used to contain livestock and horses eg through increased visibility and careful placement.

As part of this, BVA supports the responsible use of electric containment fences in livestock and horses to ensure safe, efficient grazing and livestock management.

However, whilst we recognise that when used safely and responsibly, electric containment fencing for livestock and horses can be an acceptable intervention in terms of efficient and safe herd management, we would encourage further research into alternative, non-aversive interventions to contain livestock that do not have the potential to result in negative welfare outcomes.

The use of electric containment fences in livestock

In livestock, electric containment fences are used for the following reasons:

- To prevent the movement of livestock into areas that may prove to be a threat to their health and welfare (eg roads, eroding river banks), to prevent proximity of livestock who may pose a danger to each other (eg through fighting, head butting, displacement or chasing-up), to minimise contact with environmental stages (eg gastrointestinal nematodes) or intermediate hosts of pathogenic infections (eg mud snails in the case of liver fluke), poisons (eg ragwort or refuse dumps containing lead) and to maintain biosecurity or biocontainment to assist in limiting the transmission or incursion of endemic diseases.
- For public protection to prevent animals straying on to roads and posing an accident risk to pedestrians and drivers.
- To allow stocking densities to be adjusted so that grazing pressure can be controlled. This ensures enough pasture to cater for the nutritional needs of livestock and facilitates the management of grass for maximum utilisation and feed growth/quality.
- As an alternative to barbed wire fencing which has high potential for negative health and welfare impacts due to the risk of livestock entanglement in fencing.

Responsible use of electric fencing for livestock and horses

All electric containment fences carry the risk of harm or injury to animals, especially if not correctly designed, installed or maintained. In order to ensure that physical electric containment fencing for livestock and horses is used safely and responsibly, BVA supports:

- The design, selection and maintenance of physical electric containment fences so that the strength of current is appropriate for the species in order to avoid the delivery of an excessively severe shock.

- The design, selection and maintenance of physical electric containment fences for different classes of livestock according to [AHDB Electric fencing for livestock guidance](#) and in consultation with a veterinary surgeon who will be able to signpost to relevant advice and supporting resources.
- The design, selection and maintenance of physical electric containment fences for horses in line with advice set out in the National Equine Welfare Council (NEWC) [Equine Industry Welfare Guidelines Compendium for Horses, Ponies and Donkeys](#)¹ and in consultation with a veterinary surgeon who will be able to signpost to relevant advice and supporting resources.
- The design, selection and maintenance of physical electric containment fences by landholders such that the public and other protected animals under the UK Animal Welfare Acts are not put at risk eg avoiding placing electric containment fences alongside public rights of way, ensuring clear signage to indicate if an electric containment fence is live.^{2,3}
- The careful maintenance of batteries that may be used to power electric fence to avoid any damage that could cause leakage resulting in environmental hazards or potential toxicity in livestock. This should include storing batteries in robust, highly visible boxes. Any cases of any confirmed toxicity in livestock destined for the food chain must be reported to the FSA. In addition, any damaged or non-functional batteries should be disposed of safely such that they pose no danger to grazing livestock.
- The attachment of flags to fencing or the presence of other visual markers in close proximity to fencing to ensure boundary visibility for livestock and avoid livestock entanglement where possible.
- The use of highly visible tape- or rope-like electric fencing for flight animals such as horses.
- The further development of guidance on the design, selection and maintenance of electric containment fencing for flight animals such as horses.
- The training of livestock and horses so that animals experience the fence under a controlled environment, ensuring learned avoidance of the fence preventing animals from challenging the fence in future, as well as preventing learned helplessness towards the shock delivered by the fence.⁴ Guidance on training livestock is available in the [AHDB Electric fencing for livestock guidance](#).
- The rapid identification, monitoring and removal of animals who do not respond to training or continue to challenge electric containment fencing in order to avoid any potential negative health and welfare impacts.

Recommendation 1: BVA supports the responsible and safe use of visible, physical electric containment fencing for livestock and horses. However, we recognise the aversive nature of electric containment fencing and its potential to cause unnecessary suffering if not used responsibly.

¹ Relevant extract from National Equine Welfare Council (NEWC) [Equine Industry Welfare Guidelines Compendium for Horses, Ponies and Donkeys](#):

- Electric fencing units should be installed and maintained according to the manufacturer's specification. Only electric fencing that is designed for use with horses should be used. Broad electric tape is preferable to single stranded wire as it is more easily visible to the horse.
- The person responsible should ensure that the fence is functioning effectively whenever it is in use to contain horses.
- All power units for electric fences must be effectively grounded to prevent short circuits and/or electricity being conducted to unwanted places, ie gates and water troughs. Horses should be supervised when first introduced to electric fencing.

² The British Horse Society. Advice on Electric fencing. Available at: http://www.bhs.org.uk/~/_/media/bhs/files/pdf_documents/access-leaflets/electric-fencing.ashx?la=en

³ NFU, Business Guide 407 Livestock and Rights of way. Available at: <https://www.nfonline.com/assets/30909>

⁴ Glauser, Annina et al., 2015. No increased stress response in horses on small and electrically fenced paddocks. Applied Animal Behaviour Science, Volume 167, 27 – 34. Available at: <https://www.sciencedirect.com/science/article/abs/pii/S0168159115000945>

Recommendation 2: Electric containment fencing should be designed, selected and maintained so that it does not cause more than momentary discomfort to animals.

Recommendation 3: Electric containment fencing should be designed, selected and maintained for different classes of livestock in according to [AHDB Electric fencing for livestock guidance](#) and in consultation with a veterinary surgeon who will be able to signpost to relevant advice and supporting resources

Recommendation 4: Batteries that may be used to power electric fence should be carefully maintained to avoid any damage that could cause leakage resulting in environmental hazards or potential toxicity in livestock. This should include storing batteries in robust, highly visible boxes. Any cases of any confirmed toxicity in livestock destined for the food chain must be reported to the FSA. In addition, any damaged or non-functional batteries should be disposed of safely such that they pose no danger to grazing livestock.

Recommendation 5: Where possible, flags should be attached to fencing or there should be other visual markers in close proximity to fencing to ensure boundary visibility for livestock and horses and avoid potential entanglement

Recommendation 6: Electric containment fences should be designed, selected and maintained for horses in line with advice set out in the [National Equine Welfare Council \(NEWC\) Equine Industry Welfare Guidelines Compendium for Horses, Ponies and Donkeys](#)⁵ and in consultation with a veterinary surgeon who will be able to signpost to relevant advice and supporting resources.

Recommendation 7: Highly visible tape or rope-like electric fencing should be used for flight animals such as horses.

Recommendation 8: We would welcome the further development of detailed guidance on the design, selection and maintenance of electric containment fencing for flight animals such as horses.

Recommendation 9: Livestock should be trained so that stock experience the fence under a controlled environment, ensuring learned avoidance of electric containment fences and preventing livestock from challenging the fence in future, as well as preventing learned helplessness towards the shock delivered by the fence. Guidance on training livestock is available in the [AHDB Electric fencing for livestock guidance](#).

Recommendation 10: BVA supports the rapid identification, monitoring and removal of animals who do not respond to training or continue to challenge electric containment fencing in order to avoid any potential negative health and welfare impacts.

Further research

Whilst we recognise that when used safely and responsibly, electric containment fencing for livestock can be an acceptable intervention in terms of efficient and safe herd management, it is regrettable that there are not currently alternative, non-aversive interventions available. We would therefore encourage further research into alternative, non-aversive interventions that do not have the potential to result in negative welfare outcomes.

Recommendation 11: BVA encourages further research into alternative, non-aversive interventions that enable the safe and efficient grazing and management of livestock and horses.

We note that different fear responses have been elicited by electric containment fences between different species of animals suggesting that the effectiveness and acceptability of certain interventions

⁵ Relevant extract from National Equine Welfare Council (NEWC) [Equine Industry Welfare Guidelines Compendium for Horses, Ponies and Donkeys](#):

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All power units for electric fences must be effectively grounded to prevent short circuits and/or electricity being conducted to unwanted places, i.e. gates and water troughs.

Horses should be supervised when first introduced to electric fencing.

can be species specific.⁶ With this in mind, we would also encourage species-specific research on the differing fear responses and welfare outcomes elicited by electric containment fences to ensure that any proposed interventions are developed with due consideration of species-specific responses.

Recommendation 12: BVA encourages species-specific research on the differing fear responses and welfare outcomes elicited by electric containment fences.

Virtual electric containment fencing

BVA recognises the potential role of virtual electric containment fencing in improving the efficiency and safety of food production, as well as improving animal welfare standards as part of developing precision agriculture technologies.^{7,8,9} This is provided that virtual fencing is used responsibly with the appropriate auditory and visual cues (as highlighted above) to enable sufficient boundary detection and demarcation.

As such, we would welcome further species-specific research into the use of virtual electric containment fencing to enable an evidence-based approach to its use across livestock species.

Recommendation 13: BVA would welcome further species-specific research into the use of virtual electric containment fencing to enable an evidence-based approach to its use.

6 Hosey, Geoff, Melfi, Vicky and Pankhurst, Sheila, 2013. Zoo animals: behaviour, management and welfare, 2nd edition. Oxford University Press. P.186

7 Umstatter, C., 2011. The evolution of virtual fences: A review. Computers and Electronics in Agriculture. Volume 75. Issue 1. <https://doi.org/10.1016/j.compag.2010.10.005>

8 Markus, S. B., Bailey, D.W. Jensen, D., 2004. Comparison of electric fence and a simulated fenceless control system on cattle movements. Livestock Science. Volume 170. Available at: <https://www.sciencedirect.com/science/article/abs/pii/S1871141314005046>

9 Lee, C. et al, 2011. Associative learning by cattle to enable effective and ethical virtual fences. Applied Animal Behaviour Science. Volume 119, Issues 1-2. Available at: <https://doi.org/10.1016/j.applanim.2009.03.010>