BVA response to Defra Bovine tuberculosis: call for views on possible future measures to accelerate disease eradication in England

Who we are

1. The British Veterinary Association (BVA) is the national representative body for the veterinary profession in the United Kingdom. With over 18,000 members, our primary aim is to represent, support and champion the interests of the United Kingdom’s veterinary profession. We, therefore, take a keen interest in all issues affecting the profession, including animal health and welfare, public health, regulatory issues, employment matters and the wellbeing of the profession.

2. We welcome the opportunity to respond to this call for views on possible future measures to accelerate disease eradication in England. Halting the spread of bovine tuberculosis (bTB) is essential for both animal health and welfare and the profitability and sustainability of the livestock industry. It is vital that we continue to utilise every tool in the toolbox to curb this devastating disease.

3. We support this engagement on a range of ideas at an early stage of the policy development process. The cattle measures working group where both BVA and BCVA have been engaged alongside wider industry has been a welcome approach.

Section one: Cattle movements

Option 1: Enhancing ibTB to support responsible cattle movements.

4. We support this option. It’s implementation must carefully consider what data are provided and seek to enable and widen access to, and use of, ibTB.

5. As Enticott et al.¹ note, a common critique of government bTB policy has been the absence of information given to private vets and farmers about bTB incidents in their local area.²,³,⁴ We support greater provision of bTB data that is routinely collated, analysed and published showing local parameters. Therefore, we support efforts to amend ibTB to provide additional information.

6. Private vets are key users of ibTB. Vets who were part of the usability trials for ibTB all “welcomed the development of ibTB. Private veterinarians, in particular, were pleased to be able to see these data, suggesting that the information was vital for them to work with their clients to help them manage bTB.”⁵ The provision of additional up-to-date and high-quality epidemiological data will be useful for this private veterinary audience.

7. Farmers are the other key audience for ibTB. However, to date, ibTB appears to have been of limited use to farmers at auctions unless the sale is catalogued to allow purchasers to research vendor bTB status in advance⁶ and the proportion of farmers using it for risk management is unknown.⁷ Providing additional information on ibTB, including the number of years that currently unrestricted cattle herds have been officially TB free, will be of use to those farmers who already make use of ibTB ahead of making a purchase and will facilitate risk-based trading in the UK. This change may also encourage some farmers to utilise this resource ahead of making purchases.

8. It is essential that farms are clearly identified within the proposed upgrade of ibTB in order to facilitate its use for risk-based trading. At present they are identified as dots on a map and there may be too much uncertainty where farms are close together.

9. BVA supports provision of data on number of years a herd is bTB free but any other data provided needs to be carefully considered. It will be essential to consider carefully what data should be provided and how that information should be presented to deliver the desired behavioural change. Outcomes of interventions are difficult to predict, and responses vary by target groups.⁸ Behavioural science can be complex, but at a basic level, the EAST (Easy, Attractive, Social and Timely) framework, developed by the Behavioural Insights Team, can be useful.

**Option 2: Mandating the sharing of information at point of sale.**

10. BVA supports this option for mandatory sharing of bTB history at point of sale. However, data must be up to date and timely and presentation of data needs careful consideration.

11. Knowledge-based, risk-based trading should be accepted as standard practice, with provision made for this to become mandatory. To facilitate this, the provision of information must be user-friendly and provided in a timely manner. The expansion of the Livestock Information Programme (LIP) should incorporate animal health data at the point of sale.

12. We support the focus on point-of-sale information sharing within this option. The Behavioural Insights Team⁹ emphasises that interventions to change behaviour should be timely, i.e., prompt people when they are most likely to be receptive. When discussing animal movements, that moment is likely to be the point of sale.

13. As noted above, it will be essential to carefully consider how that information should be presented to deliver the desired behavioural change. More information may not be better, and the information that is shared should be that which is most closely aligned with evidence-based trading.

14. The APHA bTB risk score has not been designed with the farmer or private vet as the intended end user. It would be worthwhile for Defra to engage farmers and private vets to evaluate how clear the score is for those who do not work with them every day. Any system of risk-scoring and presentation of risk scores should be simple and clear for farmers and their private vet. It would be beneficial to ensure any risk scoring aligned with other schemes that are already in use, such as that utilised by CHeCS.

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Option 3: Rewarding responsible cattle movements. Three sub-options are outlined in the Call for Views including rewarding through the: compensation policy; testing policy; and/or testing costs.

15. We support an approach that rewards responsible behaviours. Therefore, we can provide support for expanding current ‘earned recognition’ policies through compensation and testing policy.

16. There is evidence from human healthcare that positive messaging (or ‘gain messaging’) influences people’s behaviour more significantly than negative scenarios (‘loss messaging’).¹⁰ One study argued that gain messages on NHS letters (e.g. if you adopt this behaviour your life will benefit in these ways), rather than loss messages (e.g. if you don’t do this, you will suffer from x), were more effective in stimulating uptake of advice on diabetes.¹¹ The literature, therefore, suggests that there is some benefit in adopting an approach that uses positive language/scenarios to encourage behaviour changes.

17. Positive reinforcement of behaviours can also be achieved by associating them with positive recognition in the market. Several papers¹²,¹³,¹⁴ have found that compliance was a key determinant of behaviour and financial rewards for behavioural change were also seen as vital. Jones et al.¹⁵ found that dairy farmers in Spain, Sweden, France, and Germany were more likely to prioritise herd health if there was a perceived reward.

18. One means of providing positive reinforcement to farmers for demonstrating appropriate behaviour is via the compensation regime. Currently, when an animal tests positive for bTB as part of the testing regime, it will be removed and culled. The Government pays statutory compensation when it has deprived someone of their property to help eradicate a disease.¹⁶ The use of compensation has behavioural effects; it encourages participation with the government programme and removes a disincentive to report disease where it is suspected. Any change in policy should be mindful not to remove this positive behavioural effect within the current policy.

19. There are already examples where compensation is withheld for those who undertake risky behaviour as well as to reward positive behaviours. In England, the compensation regime has been used to encourage membership of the bTB health scheme accredited under the Cattle Health Certification Standards (CHeCS). A 50% reduction in compensation payment on animals purchased after the onset of a TB breakdown does not apply where the herd is

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accredited under the scheme, provided that accreditation was gained prior to the herd losing its OTF status.

20. Government should engage behavioural scientists to carefully consider how this approach could be expanded and integrated into a broader system of “earned recognition.” This would allow more positive messaging to be deployed: rewarding farmers for best practice instead of just applying penalties. Recognition should be based on the past performance, biosecurity measures and local risk faced by each farm. This should be a wider consideration than simply considering movements as described in the call for views document.

21. A holistic approach to earned recognition that incorporates compensation alongside increased bTB testing intervals should be considered.

22. Rewarding responsible cattle movements through the testing policy may fit well with a behavioural science approach because reducing the perceived burden of testing would be welcomed by farmers and would closely link the risk of their cattle with the degree of surveillance. However, it may be more difficult to create a positive messaging for rewarding responsible cattle movements through testing costs. This is because currently the cost of this additional testing is covered by the taxpayer. Breakdown testing is also covered by the taxpayer. Farmers being required to earn recognition in order to retain the status quo approach may not be seen as clearly as rewarding responsible movements but more likely seen as penalising risky movements. Government would need to consider how to communicate this change alongside other changes to ensure the overall message of rewarding responsible behaviour is heard.

23. When considering how to assess the risk of movements. It is essential that this is that this has to be closely linked to the information that is made available at the point of sale in Option 3. Option 2 and 3 are inextricably linked.

**Option 4: Regulating movements between certain herds.**

24. When cattle enter a farm, they should ideally be quarantined from other cattle in the herd to ensure that they are not able to transmit any infection (not just bTB) and to give time to perform tests. This applies to all cattle entering the herd, including newly purchased stock, hired bulls, and cattle that are already under the same herd ownership but that return from being away, e.g. from shows, markets, common grazing and from other premises. The risk is greater for purchased stock and hired bulls than for animals that have been off the farm for a short time. Nevertheless, it is important to assume that even short spells off-farm can give the opportunity for infection at other premises.  

25. The practicality of quarantining cattle depends upon several factors, including the number of animals purchased, their purpose (management stage) within the herd and the availability of suitable isolation facilities. Quarantining of cattle may also pose significant concerns around animal welfare, particularly where appropriate facilities are not available.

26. At present, it would not be feasible for all farms to be required to isolate all new animals on farm ahead of a negative post-movement test. However, this behaviour should continue to be encouraged and incentivized, for example within a wider earned recognition programme linked to improved compensation and longer testing intervals.

27. We would first and foremost support the above suggestions, which seek to empower farmers with better information with which to make informed decisions. We believe three components

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17 TBhub, [Responsible cattle movements](https://www.tbhub.org/)

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are needed for a shift to a more behaviour-centred approach, all of which are underpinned by the involvement of the veterinary profession:

- The best advice from trusted sources
- Reliable and accessible local data
- Positive messaging that rewards best practice, including a compensation and testing regime that incentivises behaviour change.

28. The introduction of the previous options should be done first and monitored to gauge any change in farmer behavior. However, it would be worthwhile to further develop this option should the desired behavioural effect not take place or to compel any farmers who do not engage with the incentive-based approach.

29. Any system of risk-scoring and presentation of risk scores should be simple, clear and useable for farmers and their private vet. It is also essential that a risk score accurately reflects actual risk. It would also be beneficial to ensure any risk scoring aligned with other schemes that are already in use, such as that utilised by CHeCS.

30. There are examples of risk scoring available already. We are aware of the APHA herd bTB risk scores which are explained within the call for views document which has been utilized by APHA internally. In our policy position, we also discuss the example from New Zealand, where all cattle herds receive an individual ranking, known as the ‘C Score’ indicating the number of years they have been clear of bTB (e.g. C7 is 7 years free) up to a maximum of 10 years.

31. We would ask Defra to consider this fully and engage behavioural scientists as well as vets and farmers is the further development of this option.

Restricting movements between defined zones or risk areas.

32. We would have some concerns with utilising defined zones or risk areas such as the existing regionalised approach (High- Risk, Edge, Low-Risk Areas). There is considerable variation within these areas as well as between them. There are areas in the HRA with a low incidence of the disease and hot spots within the LRA.

33. This variation would see farms, which have a strong past performance and strict biosecurity measures, but which are situated in an area with a higher incidence of bTB, penalised despite their best efforts. It would also act as a disincentive to farms in the HRA which seek to improve their disease status but recognise that the reward for achieving OTF status is not available to them due to the risk posed by the wider region. This would be a counter to the drives to encourage knowledge-based trading and the ownership of the disease amongst farmers.

Section two:

Option 1: Wider use of severe interpretation of the comparative skin test
Option 2: Use of bovine only interpretation of the comparative skin test
Option 3: Supplementary blood testing

34. BVA cautiously supports these options subject to comparative assessment of costs and benefits.

35. Government should thoroughly evaluate the effect of the introduction of pre- and post-movement test requirements to date. This should consider any reduction in new cases of bTB in lower prevalence regions as well as any behavioural changes that may arise from slowing the movement process.

36. The success of any system of bTB controls in cattle is underpinned by our ability to detect the presence of infection, primarily at herd level but also in individual live animals. It is vital to understand the specific context and establish clear goals before considering which test or
tests should be applied. Different tests have different strengths and weaknesses that determine their suitability in different situations.

37. As is the case for any disease, tests for bTB would ideally provide both high sensitivity and high specificity. However, no currently available test can provide 100% sensitivity and specificity. This means there is a need to prioritise outcomes. If the priority is to detect as many bTB infected cattle as possible, a highly sensitive test is the appropriate tool. If the priority is to avoid removing uninfected cattle, then a highly specific test should be applied.

38. In the SICCT test, one can adjust the interpretation (cut-off) criterion that defines a positive result to manipulate the balance between sensitivity and specificity. Lowering the cut-off to increase test sensitivity tends to reduce its specificity, and vice versa. At standard interpretation, the skin test has a high specificity reported to be around 99.98%\(^{18}\). Test sensitivity is more variable and is within the range of 50-80% at standard interpretation, depending on the stage/severity of infection and other factors.\(^{19,20}\)

39. Shifting the interpretation of SICCT to be more sensitive but less specific will find more infected animals as well as create more false positive results. However, at this point in the bTB disease control and eradication process in England, there is merit in seeking to prioritise sensitivity to unearth infection as part of statutory pre- and post-movement testing.

40. IFN\(\gamma\) has become a key part of the bTB programmes in all four administrations of the UK. We believe government should build on success to date and continue to fund and roll-out, the IFN\(\gamma\) test as a more sensitive supplement to the SICCT and explore the potential for wider use of IFN\(\gamma\) as part of the testing regime, including pre- and post-movement testing. There is also a benefit to using the OIE-validated antibody blood tests (IDEXX or Enferplex). Using a different test alongside SICCT may detect a different subset of the infected population, so the combined sensitivity of both tests is likely to be greater than either alone.

41. There is some benefit to exploring the more sensitive uses of the SICCT as well as combined testing approaches illustrated in these options. We would ask that a full cost/benefit analysis be undertaken by government to explore these options, as well as the option of retaining the current use of the SICCT. In particular, we would ask government to state clearly, it’s understanding of the sensitivity and specificity of each option. Any such analysis should consider any potential impact on farmer perception and trust in the reliability of the test.

Option 4: Suspend movements in the event of an inconclusive reactor

42. It is our understanding that currently, where a herd with IRs (but no reactors) has had a confirmed bTB breakdown within the last three years, APHA will suspend movements from that herd until all IRs have tested clear. If the herd has not had a confirmed breakdown in three years, movements of clear tested animals are permitted. Under this option, movements would be delayed in all cases.

43. Currently, two terms are used where there is a positive test. The OTF status of the herd is either withdrawn (OTFW) or suspended (OTFS). Where herds have an IR identified, restrictions are applied only if they have had an OTFW breakdown in the last three years, not OTFS. From an infection control point of view, there is no clear benefit attached to these

\(^{18}\) Goodchild AV, Downs SH, Upton P, et al. Specificity of the comparative skin test for bovine tuberculosis in Great Britain. The Veterinary Record. 2015 Sep 12;177(10):258. doi: 10.1136/vr.102961


two distinct categories. Therefore, restrictions should be extended to OTFS and OTFW herds.

44. Further research would be beneficial to determine the benefit of introducing this option more widely. It would be useful to understand how many movements from such herds have happened in the past and how risky they are. We appreciate that completing such an analysis would be complex.

Option 5: Amend the validity of a pre-movement test

45. Whilst we see merit in providing additional certainty to the results of a pre-movement test by reducing the period this would be valid. However, this would create a challenging barrier to trade for some cattle keepers. Additionally, Defra should also consider the effect on veterinary capacity of expanding the number of pre-movement tests required each year.

46. Northern Ireland will introduce this option as it is a requirement under the EU Animal Health Law. The lessons from this roll out in Northern Ireland should be studied and used to inform the viability of introducing this option in England.

Section three: Assessing the costs and benefits of alternative statutory testing regimes for bTB breakdown herds

Option 1: Owners of herds sustaining a lesion- or culture-positive bTB breakdown (OTF herd status withdrawn) would be able to apply to APHA for approval of privately-funded supplementary antibody testing, without the need to wait for the completion of a statutory IFN-γ herd test.

47. We support this option. Some farmers, and their private vets, would like to employ additional tests to accelerate the removal of infected individuals and better manage within-herd transmission. This would give vets the ability to apply a suitable testing regime on-farm just as would be done with other diseases. Greater flexibility in allowing the use of additional alternative tests could also give a greater sense of ownership for farmers and their private vets to tackle the disease and its prevention on their farms. This shift could also empower farmers and private vets to feel more ownership of the disease as the decision to use or not use an additional test will be theirs.

Option 2: Extend the voluntary private use of the two OIE-validated antibody tests (IDEXX and Enferplex) to certain non-breakdown situations in which private IFN-γ testing may already be authorised. This would include rapid retesting of inconclusive reactors to the skin test (IRs) in OTF herds, as well as resolved IRs subjected to life-long movement restrictions in OTF herds.

48. As above, greater flexibility in allowing the use of additional alternative tests could give a greater sense of ownership for farmers and their private vets to tackle the disease and its prevention on their farms. This shift could also empower farmers and private vets to feel more ownership of the disease as the decision to use or not use an additional test will be theirs.

49. Take-up of these alternative testing options has been low to date. In order to provide an evidence base for further use of these newer tests, government should not just allow the use of these tests but consider how to encourage their use—for example, providing compensation for animals that are culled following a positive test from a voluntary test.

Option 3: Widen the statutory use of government-funded antibody testing in some types of infected herds (those with persistent and/or recurrent bTB breakdowns).

50. We strongly support the implementation of this option. At present, this is described as “a lower priority with a longer timeframe.” We would ask that government be ambitious in its efforts to achieve this priority. These herds often present the greatest risk of maintenance and spread of the epidemic and as such this would be a very positive disease control measure.
51. A key step in achieving this aim will be deriving enough data from private voluntary use of the IDEXX and Enferplex tests in order to undertake a full cost benefit analysis. Therefore, government should be cognisant of this when it implements Option 2, and should not just seek to allow the use of these tests but consider how to encourage their use—for example, providing compensation for animals that are culled following a positive test from a voluntary test.

**Section four: Tighter control of cattle movements following the short interval test that restores a herd’s OTF status.**

We are currently considering an option to require a further test for cattle moved out of herds that have recently come out of long-term TB restrictions.

52. We believe there may be merit in slowing down the movements off farms that have regained OTF status. In Wales, cattle cannot be moved out of a herd that has recently regained OTF status after a chronic21 breakdown unless those animals undergo bespoke pre-movement testing at least 60 days after the clearing short-interval test. This reduces the risk of moving infected cattle to other herds following the lifting of restrictions.

53. Prior to a full consultation on this option, government should provide an evaluation of the risk posed by animals moved off-farm shortly after receiving OTF status. To support this, Defra should seek to learn from the experience of the Welsh Government and understand the outcome of that policy.

54. We would also suggest as part of that evaluation Defra consider the possibility of using a more nuanced risk-based approach as part of this option. For example, it may be particularly beneficial to introduce this requirement for moves into the LRA from recently cleared herds.

55. Alongside this option, it is vital that all parties are proactive in making sure these herds that have been under long term restrictions are truly OTF with increased efforts put into biosecurity and additional testing to remove residual infection.

**Section five: differentiation of compensation based on herd owners’ implementation of basic (“no regrets”) bovine TB biosecurity measures**

We are currently considering an option to differentiate compensation payments based on herd owners’ implementation of basic (“no regrets”) bovine TB biosecurity measures.

56. As can be seen from our response to Section 1 Option 3, we strongly support a wider system of “earned recognition.” This would allow more positive messaging to be deployed: rewarding farmers for best practice instead of just applying penalties. A holistic approach to earned recognition that incorporates compensation alongside increased bTB testing intervals should be considered.

57. It is concerning that this option and section 1, option 3 are considered separately. Divorcing implementing on-farm biosecurity measures from cattle movements in the development of an earned recognition scheme would be counterproductive as the two go hand in hand to form a complete biosecurity policy. Recognition should be based on the implementation of biosecurity measures alongside other factors, including local disease risk and past performance.

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21 The Welsh Government’s definition of a chronic herd breakdown is a cattle herd that has had its Officially TB Free Status Withdrawn (OTFW) and:
- Has been OTFW for a duration of 18 months or more (i.e. a persistent breakdown); OR
- Became OTFW at or before the 12-month check test, following an earlier OTFW breakdown (i.e. a recurrent breakdown), but excluding recurrent breakdowns, where all reactors are animals brought in since the close of the previous incident, unless subsequent molecular typing information does not support a purchased origin.

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58. The content of a set of “no regrets” measures will be a complex task. We support the efforts of CHeCS and BCVA in developing an entry-level scheme that could form the basis of the “no regrets” basic approach to biosecurity.

59. Implementing these biosecurity measures cannot be seen as a tick box exercise. This should be developed as an opportunity to encourage engagement between farmers and their private vets. Measures to enhance biosecurity are strengthened when farmers and their private vets work together. Farmers see their private vet as a “reliable and trustworthy” source and also understand the importance of local knowledge and familiarity with specific localised bTB situations on a particular farm. Private vets are in a unique position to advise their clients on overall infection control and disease prevention, and they have an important role to play in disease investigation.

60. Here Defra could learn from the experience in Northern Ireland, where DAERA has developed a bTB Biosecurity Questionnaire for use by farmers, which was introduced under the bTB testing contract. The annual questionnaire is completed for every herd in Northern Ireland by the farmer’s private vet alongside a herd test. The form, completion of which only takes a short time, is designed to start discussion, and raise awareness of biosecurity at individual farm level. The questionnaire is for the benefit of the farmer and, to encourage accurate completion, DAERA does not receive a copy of the completed form, which helps to foster trust between the farmer and their vet. However, in its current form, it doesn’t stimulate discussion on infection control and is seen by many as a box-ticking exercise.

Section six: Herd Health Plans for persistent TB breakdown herds

We are currently considering requiring owners of persistent breakdown herds who wish to source new stock to develop a bTB-specific herd health plan with their private vet.

61. We support this proposal. Herd health planning is seen as a key area of farm practice. Vets not only identify matters that limit health and productivity but also find solutions and work with their clients to make the necessary changes. We are supportive of this proposal.

62. As private vets will be tasked with undertaking this work, it is essential they are equipped with the necessary data and contacts to support their work. Good decisions are based on reliable, accessible and timely information. For example, ibTB data about farms from which cattle have been moved on, and summary data about the local area (e.g. county) such as monthly incidence/prevalence in different herd types, median duration of restrictions, average number of reactors per herd, etc). Once private vets and farmers have access to this information, it can be used to guide trading practices which reduce the risk of introducing bTB into their herds as well as other biosecurity measures.

63. Cooperation between private vets and governments will also be vital. To support partnership working, there should be a specific mechanism for direct contact between a named government and named private vet so they can engage more fully and provide joined-up and long-term support to farmers. To facilitate this, government should explore how to introduce systems to allow greater data sharing between government vets and private vets.

64. To provide a level of consistency and quality of herd health planning advice amongst vets in relation to bTB management and control strategies, bTB advisor training should be developed. BCVA has already delivered advisor training and online accreditation for the BVD Free and National Johne’s Management Plan initiatives. This ensures that vets are fully up to speed with the details of disease management and control. It could be replicated to give private vets additional training for bTB and provide a similar level of consistency and quality of advice amongst vets.
65. There is an opportunity with the development of the Animal Health and Welfare Pathway (AHWP) to align this option with the wider aims of the Pathway. Specifically, the ambition as set out in the Path to Sustainable Farming: An Agricultural Transition Plan 2021 to 2024:22

“While the approach may vary between sectors, evidence suggests vets are critical to unlocking health and welfare improvements. We are looking to financially support vet visits, so livestock farmers can create better farm health and welfare management plans through diagnostic testing, farm-specific preventative advice and increased peer learning. These plans will provide data and structural knowledge of the sectors, creating benchmarking and evaluation opportunities at national as well as local level.”

66. BVA President, James Russell, sits on the Steering Group for the AHWP as well as the TB Partnership (alongside BCVA representative Rebecca Cavill). He will endeavour, in these roles, to find and highlight opportunities for cross-cutting benefits. We would hope that different parts of Defra are able to do the same.

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