

# British Veterinary Association (BVA) Northern Ireland Branch submission to DAERA Consultation on the Department's Proposed Implementation and Next Steps of the bTB Eradication Strategy for Northern Ireland

## 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 and employment matters.
2. The BVA's Northern Ireland Branch brings together representatives of local veterinary associations, BVA's specialist divisions, government, and research organisations in Northern Ireland. The Branch advises BVA on the consensus view of the Northern Ireland members on local and United Kingdom issues.
3. We appreciate the opportunity to respond to this consultation on the Department's proposed implementation and next steps of the bTB eradication strategy for Northern Ireland. We welcome the new momentum that is being given to the development and delivery of bTB policy in Northern Ireland, following the reinstatement of a DAERA Minister.
4. Alongside this response we have included the BVA position on the control and eradication of bovine TB (bTB) which was published in July 2020. It is a detailed and up-to-date expert analysis of the evidence relating to all aspects of the disease.
5. Our policy position brings together veterinary expertise in cattle and wildlife and applies new and emerging evidence to set out a holistic roadmap to guide the efforts of vets, farmers, and government in bTB control and eradication. Our policy is relevant across the UK. BVA Northern Ireland Branch was represented within the membership of the working group that developed the position. We are also grateful to DAERA for providing expert evidence to our working group.

## Management, Oversight and Partnership Working

6. We fully support the development of a partnership approach involving farmers, vets, DAERA officers and other appropriate stakeholders (food processors, conservationists, scientists) as a strategy to develop constructive engagement, encourage ownership of the disease, and ensure that bTB eradication strategy is unified and appropriate to the local area.
7. We welcome the plan to establish structures to manage and oversee partnership working. Veterinary expertise and input at every level is a necessity and we therefore strongly support this inclusion. Veterinary Officers and private veterinary practitioners (PVPs) bring clinical expertise as well as a wealth of local knowledge to the process of eradicating bTB, working in partnership with farmers to provide biosecurity advice, surveillance expertise, and farm health planning.
8. Consideration should be given to providing Regional Eradication Partnership (REP) members payment for their professional expertise. We are concerned good candidates will be deterred from applying for these roles which will carry significant commitment and

responsibility. As the role of DRTs will be ad hoc, it will be appropriate, in this case, that members should not receive payment.

## The increased use of interferon gamma testing

9. We support the wider, government-funded roll-out of this more sensitive test, as a supplement to the SICCT, to support the prompt identification and removal of infected animals from breakdown herds.
10. Effective communication with keepers and vets regarding this form of testing will be key. Poor communication around testing regimes can lead to frustration from all stakeholders, at farm and government/ veterinary levels.
11. It is essential that test interpretations are as consistent as possible across Northern Ireland and consideration must be given to how this will be facilitated. This could include the provision of case studies detailing the more complex situations, and DAERA working with software companies to ensure that correct and consistent interpretations are generated every time.
12. Any inconsistencies in interpretation make it extremely difficult for the tester to inform the keeper which animals are to be taken and which retained on farm. This could lead to some animals not being tagged and isolated as reactors, creating stress for all concerned. Serious consideration must be given to how this will be addressed.
13. We support the removal of animals which test positive. Where a test proves inconclusive, restricting the animal to the holding would be proportionate to the risk of subsequent disease disclosure. Again, effective communication with the farmer is extremely important.
14. We welcome efforts to-date by the government to expand IFN $\gamma$  capacity. We also understand that there remains a need to set criteria to prioritise the use of existing capacity to where the greatest benefit can be created. Given that policy will be constrained by testing capacity, there should be serious consideration given to the use of the IDEXX ELISA in cases that meet the criteria but are prevented or substantially delayed from being IFN $\gamma$  tested due to lack of resource.
15. We would question the implication that IFN $\gamma$  testing is done alongside the next skin test. Once the need for IFN $\gamma$  testing has been determined this should be done as soon as possible to identify and remove infected animals so as to limit further spread.
16. We would question the benefit attached to using the test “where a large or valuable group of non-reactor cattle are being considered for slaughter due to a high incidence of skin test reactors”. This could lead to confusion amongst farmers and undermine trust in the skin test which is highly specific and the foundation of the entire bTB programme.
17. The total exclusion of ‘Beef finishing herds’ from enhanced testing is not appropriate. If these animals are at pasture and/or biosecurity measures are not in place and enforced, they pose a potential infection risk to other livestock and wildlife. We appreciate that these are younger animals, and their movements are limited, and this variation is consistent with other UK Policy. We would hope that capacity for IFN-g testing large herds will be quickly increased, and these herds fully included in the plan.
18. It would be beneficial to provide as much clarity as possible to farmers and vets on when IFN $\gamma$  capacity will be deployed. Establishing objective and fair criteria is appropriate. However, as indicated, in certain cases individual veterinary risk assessments will be utilised as part of certain criteria. We acknowledge the professional judgement of the government vets who will carry out these assessments and will often be tasked with making difficult decisions. Good communication will be vital to avoid confusion and frustration from stakeholders who may not understand how a veterinary risk assessment has led to a specific outcome.

## Action on persistently infected herds

**British Veterinary Association (BVA) Northern Ireland Branch submission to DAERA Consultation on the Department’s Proposed Implementation and Next Steps of the bTB Eradication Strategy for Northern Ireland**

19. We support this action and would welcome the opportunity to engage with DAERA as it progressed. We believe that interventions and available resources should be targeted where the impact is most likely to result in positive outcomes. We are therefore encouraged to see the focus on risk-based assessment and the targeting of chronically infected herds.
20. We agree with establishing an agreed definition of chronic herd, to provide certainty for farmers and veterinary surgeons. For example, the Welsh Government 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 (ie a persistent breakdown); OR
  - Became OTFW at or before the 12-month check test, following an earlier OTFW breakdown (ie. 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.
21. Developing tools to support persistently infected herds is welcome. This should be done in partnership with farmers and PVPs with local knowledge.
22. We have supported the development of individual action plans for chronic herds in Wales and England. 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.

### **Requirement for a herd test prior to re-stocking**

23. We note that the Department will consult on a risk-based approach to permit restocking to take place following a breakdown. Engagement with the veterinary profession will be vital.
24. We accept that restocking herds which have lost their OTF status has been identified as a risk to disease control. However, this risk has not yet been quantified and any policy on restocking should take this into account. Any policy should also consider the impact of restricting restocking on the viability of many farms, particularly dairy farms.
25. BVA and BCVA have supported the procedure used in England, Scotland and Wales. Here, the farmer may apply for a licence enabling the movement of cattle from unrestricted premises on to restricted premises. It is necessary to complete at least one short interval test (SIT) before any consideration to issue a licence to allow restocking can take place. A general licence will only be issued in low-risk situations. It will allow multiple movements and will last the duration of a breakdown, unless the TB disease risk increases significantly, or testing becomes overdue by more than one month. The general licence can only be issued after a satisfactory risk assessment by APHA and may be subject to additional conditions. A specific licence may be issued when a general licence is inappropriate. It will specify which animals can move, only allows a single movement and is valid for a defined period.

### **Allow limited moves from bTB breakdown herds under certain conditions**

26. We support the principle of the specialist bTB finishing unit, which provides a useful outlet for farms affected by bTB movement restrictions. They can be beneficial for animal welfare, by allowing movement off farm and thereby reducing the risk of overcrowding. They also provide business continuity for farmers by providing an option to take animals out of circulation quickly.
27. We would only support indoor units which meet strict biosecurity requirements to reduce risk of transmission via personnel, equipment, to and from wildlife. Inappropriately managed finishing units could potentially pose a risk of spreading infection. We would appreciate the opportunity to engage with you on the development of appropriate biosecurity measures.

28. We support the monitoring of finishing units to determine if there is an increased risk of infection to both cattle and wildlife and an appropriate evaluation of the policy based on these findings.

### **Reactor quality assurance checks**

29. We note that DAERA will keep its procedures in relation to atypical reactions to the tuberculin test under review and, in conjunction with the TBEP, will continue to consider additional measures to counteract suspected fraudulent activity. Engagement with PVPs on any changes to the process of quality assurance will be essential.

### **Expansion of molecular techniques to support bTB eradication**

30. We support the expanded use of molecular techniques. We believe this will provide useful information on the epidemiology of the disease which will provide useful evidence on which to make decisions in future.

### **Provision for the testing of non-bovines**

31. We agree with DAERA introducing the provision to test non-bovine animals in holdings where cattle are not present.
32. The pathology, clinical presentation, and epidemiology of bTB infections and disease can vary considerably across non-bovine farmed species. Given the right conditions, they can also infect other animals and herds of the same species (eg via movements of undetected infected animals between holdings). However, with no statutory surveillance programme for non-bovine farmed species, there is some uncertainty around the true prevalence of infection.
33. There are also wider social and economic factors between and within different sectors and it is important to be mindful of the differing relationships that keepers will have to their animals. Within each species there will be a wide range from large scale farmers to those who have a relationship that is more akin to that of a pet owner.
34. Government should enact clear and consistent protocols for the use of testing in non-bovine farmed species. Across non-bovine farmed animals, there are issues that are common across all species. Government and industry communications on the issue of bTB are largely designed with cattle farmers as the intended audience, which is understandable given the relative significance of bTB within the cattle sector. However, as a result, farmers of non-bovine species can be less aware of the risk of bTB to their animals. Government, industry, and the veterinary profession should tailor messages to the farmers of non-bovine farmed species.
35. Although bTB in such animals is an important problem, there is far less well-validated data for the diagnosis of the disease in live animals other than cattle. Testing of non-bovines must fully consider the availability and reliability of test in non-bovine species as well as how this will be communicated to farmers.
36. In England, the Tuberculosis (Non-bovine Animals) Slaughter and Compensation (England) Order 2017 introduced specific rates of statutory compensation for pigs, sheep, goats, captive deer, alpacas, llamas, vicuna and guanaco) that are subject to compulsory slaughter for bTB disease control purposes. Provision of compensation is important for encouraging compliance and engagement with the bTB control programme and should be introduced for species that would be subject to any new testing requirements.

### **Statutory improvement notices**

37. BVA support the use of improvement notices and we understand the Welsh Government has already adopted the principle of reducing compensation should farmers continue with

unacceptable high-risk practices or if they fail to adopt recommendations within such improvement notices. Where these have been applied there has been no reduced compensation as a result of non-compliance.

38. Whilst encouraging biosecurity is to be commended, additional measures should be both robust and achievable where voluntary measures are not being taken.

### **Encourage farmers to improve herd health management**

39. Improving on-farm biosecurity is essential to the bTB eradication strategy. Therefore, we agree with this proposal. To facilitate this aim it is important that provision and implementation of advice is based on the available evidence.
40. PVPs play an essential role in enabling herd-keepers in herd health management. We welcome that they will be involved in the design of this proposal, as they will be in the best position to advise farmers.

### **Informed purchasing**

41. We welcome the decision to progress with the introduction of an informed purchasing approach for Northern Ireland. BVA has given considerable thought to this concept over recent years and outlined our recommendations within our position on the control and eradication of the disease.
42. We support the principle of informed purchasing and we welcome sharing information, where there are necessary safeguards in place in relation to personal information about the farm or farmer. The Cattle Health Certification Standards (CHeCS) scheme can provide a useful model of industry led action in this area.
43. 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 up to date.
44. The Behavioural Insights Team<sup>1</sup> emphasises that interventions to change behaviour should be timely, ie, prompt people when they are most likely to be receptive. When discussing animal movements, that moment is likely to be the point of sale.
45. Implementation must carefully consider what data are provided. More information may not be better, and the information that is shared should be that which is most closely aligned with evidence-based trading. BVA supports provision of data on number of years a herd is bTB free but any other data provided needs to be carefully considered. 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.
46. It will be essential to carefully consider how information should be presented to deliver the desired behavioural change. Outcomes of interventions are difficult to predict, and responses vary by target groups.<sup>2</sup> 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.

### **Farm fragmentation and segregation notices**

47. We agree with this proposal. The risk of disease transmission exists as much within fragmented herds as it does between herds with separate owners. We welcome the

---

<sup>1</sup> The Behavioural Insights Team, EAST Four simple ways to apply behavioural insights. 2014.

<sup>2</sup> Scottish Government, Agriculture and Climate Change: Evidence on Influencing Farmer Behaviours. 2012 Oct 29.



Department's offer to work with the farming industry to 'develop and introduce' the proposal. We would ask that PVPs are also included within this engagement.

## Genetic improvement

48. Progress has been made in understanding the genetic basis of bTB resistance in cattle, enabling genetic selection for higher resistance. This sensible approach could, in the long term, make a valuable contribution to disease control.
49. Scientists have identified genetic traits in cattle that might allow farmers to breed livestock with increased resistance to bTB.<sup>3,4,5</sup> The research demonstrates that resistance of dairy cattle to *M. bovis* is partly heritable. The extensive research was undertaken jointly by the University of Edinburgh, Roslin Institute and Scotland's Rural College (SRUC), and supported by Defra and the Welsh Government.
50. This work showed genetic variation between animals and forms the basis of the TB Advantage, a genetic index utilising data on over 650,000 Holstein cows who have bTB data recorded by APHA. This data has been used to establish breeding patterns and identify more resistant bloodlines. TB Advantage is only currently available for the Holstein breed, but work is under way to establish if the index can be extended in the longer term to other dairy and beef breeds.
51. Breeding cattle with a reduced susceptibility to bTB is a long-term approach to disease control. Furthermore, genetic differences are not the only factor in determining whether or not an animal will become infected with bTB; various environmental factors as well as differences in the bTB bacteria may also affect susceptibility. However, if farmers can choose animals with better genotypes for bTB resistance, then this information can be applied in new breeding programmes alongside other control strategies.

## Transport hygiene

52. We agree this is a sensible approach.

## Actions on Research

53. BVA would urge DAERA to continue to support bTB research and ensure it is adaptable to changing circumstances. We support a continued role for the TBEP, providing direction and scrutiny for government and other stakeholders.
54. New research is vital to our understanding of bTB and the efforts to control and eradicate it. bTB is a complex challenge that requires a multifaceted response. A successful research programme will need to gather the expertise of multiple disciplines to increase understanding of the factors behind bTB transmission and develop new tools to tackle infection.
55. The importance of epidemiology is impossible to overstate. As a discipline, it is central to the understanding of bTB transmission and how it is influenced by different interventions and controls. The evidence provided by epidemiological research underpins the design and delivery of bTB policy. Government should support further research into the epidemiology of bTB, to highlight gaps in our understanding of the disease.
56. Research in the social sciences provides insight into farmers' decision-making regarding cattle purchasing, the application of biosecurity measures on farm and how decisions that

---

<sup>3</sup> Raphaka K, Matika O, Sánchez-Molano E, et al. Genomic regions underlying susceptibility to bovine tuberculosis in Holstein-Friesian cattle. *BMC genetics*. 2017 Dec 1;18(1):27. doi: 10.1186/s12863-017-0493-7

<sup>4</sup> Tsairidou S, Woolliams JA, Allen AR, et al. Genomic prediction for tuberculosis resistance in dairy cattle. *PLoS One*. 2014 May 8;9(5):e96728. doi: 10.1371/journal.pone.0096728

<sup>5</sup> Bermingham ML, Bishop SC, Woolliams JA, et al. Genome-wide association study identifies novel loci associated with resistance to bovine tuberculosis. *Heredity*. 2014 May;112(5):543-51. doi: 10.1038/hdy.2013.137

promote disease control can be incentivised. The prominence of social science research within animal health policy design is growing. UK veterinary schools have undertaken interdisciplinary research using social science to address important issues such as antimicrobial resistance. Greater application of social science should form a central aspect of the bTB control and eradication programmes.

57. Equally as important as commissioning new research, is the dissemination of research and new information to vets, farmers and the public. Consideration should be given to what information is useful to farmers and there should be greater utilisation of behavioural approaches to encourage the application of research findings of into practice.
58. To date, governments in the UK have supported the development of new research in many areas. Research has also been funded by a wide range of bodies and this diversity is a strength. Nevertheless, there would be a benefit in providing greater strategic direction to research. A strategic research plan should be developed with all relevant stakeholders and disciplines. There should be a focus on commissioning research that will have practical impacts on farm, and therefore the inclusion of practitioners is essential.
59. It is imperative that the limited resources available for research are directed to those areas which would have the greatest impact. We believe the five key research priorities for the next five years are:
  - The development and validation of a cattle vaccine and DIVA test
  - Better understanding of the effects of badger vaccination on the incidence of bTB in cattle.
  - Evidence to establish the role of cattle faeces in the transmission of bTB
  - Better understanding of the causes of repeat breakdowns
  - Estimate of the true costs of bTB breakdowns to farms

## New proposals

### Badger control proposal

60. We note the preferred option for badger control outlined in the consultation document is option 8:

Introduce the other Programme Enhancements outlined in this consultation along with Wildlife Intervention. Wildlife intervention would be in the form of a non-selective badger cull using controlled shooting of free roaming badgers, as the predominant badger removal method, delivered and paid for by farmer led companies.

61. We believe badger culling in a targeted, effective and humane manner is necessary in carefully selected areas where badgers are shown to be a significant contributor to the presence of bTB in cattle. We are encouraged by comments in section 4.7.1 that outlines how surveillance of badgers will be carried out through RTA surveys. We would ask that these RTA surveys are extensive and fully considered when making decisions regarding potential badger interventions.
62. Our position has been formed using the seven consensus principles for ethical wildlife control, as described by Dubois et al.<sup>6</sup> Whilst we support further evidence on other methods,

---

<sup>6</sup> Dubois S, Fenwick N, Ryan EA, et al. International consensus principles for ethical wildlife control. *Conservation Biology*. 2017 Aug;31(4):753-60. doi: 10.1111/cobi.12896

badger culling is at present the only method of badger control that has been shown to reduce the incidence of bTB in cattle.<sup>7</sup>

63. Of the methods of culling available, there is evidence that cage trapping and shooting is the method available that provides the least pain and distress. Therefore, we support cage trapping and shooting as the preferred method of culling and are unable to support the use of controlled/ free shooting.
64. The results from the second year of pilot badger culls in England did not demonstrate conclusively that controlled shooting could be carried out effectively and humanely based on the criteria set for the pilots. Adequate training for those undertaking culling operations is essential. Furthermore, appropriate monitoring of cull activities is important to ensure the effectiveness and humaneness of operations can be assessed.
65. We do not support the use of stopped restraints as they do not minimise possible welfare concerns to the extent possible with cage trapping. Although we are aware of published work to suggest that using stopped restraints can have comparable levels of injury to cage trapping,<sup>8</sup> this study was in ideal conditions and reliant upon rapid recovery of trapped animals. We do not believe that this will be the case in normal routine trapping situations. The length of time a badger is held in a restraint may be a predictor of injury and where badgers are trapped for longer periods of time injuries may be much more severe. As Murphy and others have suggested, physical injuries are just one aspect of the welfare of badgers captured with stopped restraints.
66. The extension of the culling to include the period November to January puts early born dependent neonatal badgers at a welfare risk. It is also inappropriate for cage trapping and shooting (the only method we could support) due to weather exposure risks. We would also question the benefit of culling over these winter months when badger activity is greatly reduced.
67. We note the intention to use culling to reduce the overall badger infection load and pave the way for a vaccination only approach. Vaccination of badgers reduces the severity and progression of bTB in badgers. However, the effect badger vaccination has on cattle bTB incidence is uncertain. Government should prioritise research to evaluate the impact of badger vaccination on cattle. This evidence should provide a greater understanding of this control method as part of any 'exit strategy' from culling, as envisioned by the consultation document.

### **Funding of cull activities**

68. We note that DAERA propose that the funding of wildlife intervention would see government pay for administration, elements of training costs, mentoring, advice and monitoring (including postmortem inspections, as required) and farmers would pay for deployment expenses, as is the case in England.
69. We agree with this approach which is an appropriate balance of funding between government and farmers. It is appropriate for government to ensure proper funding of the key aspects which are listed above which are essential for ensuring animal welfare concerns are minimised. Government should ensure this funding is at an appropriate level to meet these requirements. Seeking deployment costs from farmers is an appropriate step to ensure farmers have a sense of ownership of controlling the disease.

---

<sup>7</sup> Downs et al. (2019) Assessing effects from the first four years of industry-led badger culling in England on the incidence of bovine tuberculosis in cattle, 2013 - 2017 Scientific Reports 2019 ([www.nature.com/articles/s41598-019-49957-6](https://www.nature.com/articles/s41598-019-49957-6)).

<sup>8</sup> Murphy et al, 2009



## Compensation cap

70. If an animal or group of animals is compulsorily slaughtered for the purposes of statutory disease control, compensation should be paid. Compensation provides reimbursement for losses suffered by the animal keeper and as such compensation should be equitable and reflect the market value of the animal slaughtered. If the compensation paid is below market value the risk of keepers concealing animals suspected of infection will be heightened and the incentive to co-operate with authorities will be reduced, contributing to further disease spread.
71. We support the principle of a reduction in compensation where there is lack of compliance on the part of the keeper with statutory disease control or accepted best biosecurity practice. We note that unlike recent changes to compensation in Scotland, Wales and England there has been no movement to link reductions in compensation with poor biosecurity or failure to meet legal requirements.
72. The proposed cap in compensation is now in line with the £5,000 cap proposed elsewhere in the United Kingdom. When the Scottish Government issued their consultation document, we noted there should be equity in compensation with England and Wales to ensure Scotland was 'not seen by some as a more favourable option in terms of moving high risk cattle to Scotland or indirectly to other low risk areas in England.' Setting the Northern Ireland cap at £5,000 would alleviate our previous concerns that there may have been unintended incentives to move infected animals to higher compensation jurisdictions.
73. If possible, a specific value set in legislation should be avoided as this may be difficult to update and is susceptible to becoming out of date. A £5,000 cap may be appropriate today but will be less appropriate over time. A better cap would be determined by a formula based on market values that could therefore reflect changes over time.

## Compensation reduction

74. We note that the Department proposes a compensation reduction to 90% in year one and then to 75% in subsequent years from the current 100% compensation level. We note that unlike recent changes to compensation in Scotland, Wales and England there has been no movement to link reductions in compensation with poor biosecurity or failure to meet legal requirements. This is a missed opportunity to develop a more forward-thinking approach to compensation linked to behavior change.
75. We support an approach that rewards responsible behaviours through a system of 'earned recognition' that considers all aspects of the control programme including compensation and testing policy.
76. There is evidence from human healthcare that positive messaging (or 'gain messaging') influences people's behaviour more significantly than negative scenarios ('loss messaging').<sup>9</sup> 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.<sup>10</sup> The literature, therefore, suggests that there is some benefit in adopting an approach that uses positive language/scenarios to encourage behaviour changes.

---

<sup>9</sup> Rose DC, Keating C, Morris C. [Understanding how to influence farmers' decision-making behaviour: a social science literature review, report for the Agriculture and Horticulture Development Board](#). 2018.

<sup>10</sup> Kullgren JT, Hafez D, Fedewa A, Heisler M. A scoping review of behavioral economic interventions for prevention and treatment of type 2 diabetes mellitus. *Current diabetes reports*. 2017 Sep 1;17(9):73. [doi: 10.1007/s11892-017-0894-z](#)

77. Positive reinforcement of behaviours can also be achieved by associating them with positive recognition in the market. Several papers<sup>11,12,13</sup> have found that compliance was a key determinant of behaviour and financial rewards for behavioural change were also seen as vital. Jones et al.<sup>14</sup> found that dairy farmers in Spain, Sweden, France, and Germany were more likely to prioritise herd health if there was a perceived reward.
78. 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. 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.
79. 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 accredited under the scheme, provided that accreditation was gained prior to the herd losing its OTF status.
80. 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 reducing compensation over a number of years as described in the consultation document.
81. A holistic approach to earned recognition that incorporates compensation alongside increased bTB testing intervals should be considered. 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.

---

<sup>11</sup> Cary J, Roberts A. The limitations of environmental management systems in Australian agriculture. *Journal of Environmental Management*. 2011 Mar 1;92(3):878-85. [doi: 10.1016/j.jenvman.2010.10.055](https://doi.org/10.1016/j.jenvman.2010.10.055)

<sup>12</sup> Gourdet CK, Chriqui JF, Piekarz E, et al. Carrots and sticks: compliance provisions in state competitive food laws—examples for state and local implementation of the updated USDA standards. *Journal of school health*. 2014 Jul;84(7):466-71. [doi: 10.1111/josh.12168](https://doi.org/10.1111/josh.12168)

<sup>13</sup> Prager K, Curfs M. Using mental models to understand soil management. *Soil Use and Management*. 2016 Mar;32(1):36-44. [doi: 10.1111/sum.12244](https://doi.org/10.1111/sum.12244)

<sup>14</sup> Jones PJ, Sok J, Tranter RB, et al. Assessing, and understanding, European organic dairy farmers' intentions to improve herd health. *Preventive Veterinary Medicine*. 2016 Oct 1;133:84-96. [doi: 10.1016/j.prevetmed.2016.08.005](https://doi.org/10.1016/j.prevetmed.2016.08.005)