



## Call for Views Group Guidance: April 2021

Defra has set out a 'Call For Views' on additional measures to help tackle bovine tuberculosis (bTB) in cattle in England, alongside their recent consultation on proposals to eradicate the disease. The options put forward by Defra and requests for other suggestions are focused on cattle measures. Badger Trust has always believed that cattle measures are the answer to solving the bTB situation, and that badgers are no more than a costly distraction to the main issue, cattle-to-cattle transmission.

**Badger Trust does not believe that options suggested in the 'Call for Views' go far enough, or that they place the emphasis correctly in order to be effective.** Please join us in responding to this 'Call For Views' and share it with your followers and supporters, encouraging them to respond too, so that we can clearly show the Government our concerns on this important issue. We urge you to respond for your badger or wildlife group and as an individual too, as individual responses carry much greater weight.

This dedicated guidance document includes question-by-question information that you may find helpful for your own response. And if you are able, please add your suggestions and knowledge – your input will help the badger community forge the strongest response.

### **Submit your response online:**

<https://consult.defra.gov.uk/bovine-tb-2020/bovine-tuberculosis-call-for-views-on-possible-fut/>

### **DEFRA Call for Views supporting documents pdf**

[https://consult.defra.gov.uk/bovine-tb-2020/bovine-tuberculosis-call-for-views-on-possible-fut/supporting\\_documents/2021%20Bovine%20TB%20Call%20for%20views.pdf](https://consult.defra.gov.uk/bovine-tb-2020/bovine-tuberculosis-call-for-views-on-possible-fut/supporting_documents/2021%20Bovine%20TB%20Call%20for%20views.pdf)

### **DEFRA Deadline - 11.59pm on 21st April 2021**

### **DEFRA Part C 12: Call for views – questions and information sought**

*Question (i): What is your name?*

*Question (ii): What is your email address?*

*Question (iii): What is your organisation?*

*Question (iv): Do you want your response to be confidential?*



## Section one: Cattle movements

**DEFRA: 1. We would welcome views on what should constitute a 'truly closed' herd.**

**Badger Trust:** The concept of a closed herd is a useful way for farmers to think about risks and behaviours that lead to importing bTB and other cattle diseases. However, this is something that would be extremely difficult to achieve in practice. Even if a herd is closed for breeding then it is still possible to import bTB through poor biosecurity or other operational requirements or day-to-day behaviours.

A truly closed herd would not do any of the following;

- Buy in replacement cattle of any kind
- Lease bulls
- Buy or borrow colostrum
- Take cattle, sheep or other livestock to a show and turn them out with the herd afterwards
- Use community or shared/leased pasture or lease pasture and later graze it
- Share fence lines or water sources with a neighbour
- Share use of a trailer or other vehicles for transporting cattle
- Bring an unsold animal back from an auction market or sale
- Have had an animal jump the fence, or a neighbour's animal
- Mix different types of livestock in the same area (e.g. cows and sheep)
- Allow service providers (vets, feed trucks, etc.) or other traffic access to the farm without a full disinfection protocol
- Visit another farm, auction market, show, sale or any other event where cattle are present without a clothes change and boot disinfection protocol on return

The need to avoid inbreeding in cattle can only be overcome in a closed herd by artificial insemination.

It may be helpful for farmers to create local groups of farms where they all know and trust each other and only obtain new stock and breeding services (bulls) from within what becomes a closed group.

Developing a closed herd mentality either individually or amongst a small local group of farmers may have a significant impact on the spread of bTB.

**DEFRA: 2. We would welcome views on how best to assess the risk of movements. For example, by herd location, by APHA herd bTB risk score (or at least by number of years since the last bTB herd breakdown), or other.**

- **Option 1: Enhancing ibTB to support responsible cattle movements.**
- **Option 2: Mandating the sharing of information at point of sale.**





## Section one: Cattle movements

- **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.
- **Option 4: Regulating movements between certain herds.** Three sub-options are outlined in the Call for Views including requiring isolation pending results of a negative post-movement test; restricting movements to herds of lower bTB risk status; and restricting movements between defined zones or risk areas.

**Badger Trust:** Response is covered in section 3.

**DEFRA: 3. We would welcome views on these options and their potential impact. Please include any information or evidence you feel could be relevant to inform our assessment and decisions. If possible, can you please consider:**

- *The potential benefits and risks with these options (and sub options).*
- *The practical deliverability of the options outlined (and sub options).*
- *Factors that are potentially missing from the current options.*
- *The most appropriate combinations of options (and sub options).*
- *Implications for your business or those that you support (if applicable).*

**Badger Trust:** Three of the four options need to be acted on with urgency (Options 1, 2 and 4). Option 3 would require significant changes.

**Option 1: Enhancing ibTB to support responsible cattle movements.** The ibTB system needs to be developed to provide as much information as possible to inform safe purchasing decisions. It also needs a user-friendly interface to make sure the information is accessible to all levels of IT competence.

In the Defra 2020 review of cattle purchasing behaviour (ZF0532 Endicott, Little et al) it was noted that some farmers, particularly the older generation, do not or have little confidence in using the internet. This needs to be addressed as a matter of urgency.

The DEFRA survey of cattle holders in 2019 found that only 28% of farmers were using ibTB in some capacity (yet 87% have a laptop or P.C. and 71% own a smartphone device<sup>1</sup>) to check for breakdowns<sup>2</sup> and 72% never use it in any capacity at all.

The development of a phone and tablet App that linked to the ibTB and Livestock Information Service (LIS) interface would be especially useful to increase the use of information and make it available anywhere and for any type of sale.

The system could be developed into a virtual online market where farmers could register their intentions to buy or sell cattle to plan their purchasing around what was available at the time they wished to buy.

<sup>1</sup> Farm Practices Survey (Autumn) 2019 - England, DEFRA, 2019.

<sup>2</sup> Cattle Farm Practices Survey (April) 2019, DEFRA 2019.





## Section one: Cattle movements

This system should be used in combination with a mandatory system (Options 2 and 4) to ensure widespread uptake.

**Option 2: Mandating the sharing of information at point of sale.** It is essential that bTB information is available at the point of sale (auction) and that it is mandatory. This is vital and underpins the use of the ibTB system and any other incentive or mandatory regulative measure.

Under a voluntary system any auction that provided the information would be at a disadvantage. Sellers could seek out auctions or sales that allowed them to conceal their disease history at the expense of those that did not. Therefore it must be mandatory.

The principal benefit of mandatory point-of-sale information is that it would enable market forces to disincentivise risky trading habits at auction, forcing farmers selling cattle to pay much greater attention to disease risk on their farms or risk lower prices. It would create a crude but effective risk-based trading (RBT) system – where purchasers took notice of the information – and provide the informational basis for a regulated system.

Excluding other methods of cattle purchase (e.g. direct between farms) could push the problem elsewhere. A simple web-based App would allow farmers with both desktop and smartphone to quickly and easily find available cattle complete with pertinent information.

### Option 3: Rewarding responsible cattle movements

#### (i) Rewarding responsible cattle movements through compensation policy

The danger of this kind of incentive is that it creates a culture of expectation. Should funding for such an incentive scheme be withdrawn in future there is a high probability that the negative behaviours would return. Equally, without effective compliance monitoring there is a danger of monies being paid and the negative behaviours continuing unnoticed.

Instead, best practice should be standard and compensation only paid where farms are compliant.

#### (ii) Rewarding responsible cattle movements through the testing policy

The testing regime should be set and apply to all farms, with negative consequences for failure to comply.

Rewarding responsible cattle movements via the testing policy and specifically via location seems questionable.

Given that the taxpayer is funding routine surveillance testing, there is no excuse for failing to get the tests done on time (subject to genuinely unforeseen or unavoidable circumstances). To be fair the testing regime should be universal.

The concept of 'earned recognition' is an inverse incentive. Rewarding individuals for 'doing the right thing' does nothing to change the habits of those that do not. The concept should be replaced by a fully formed Risk Based Trading (RBT) scheme that rewards those at the best practice end with higher prices and/or volume of trading at market. There should be no other incentives.





## Section one: Cattle movements

Farmers should not be 'rewarded' for conducting mandatory surveillance tests on time, they should be fined for failing to do them on time. Presenting dirty cattle for slaughter (clean livestock policy) should result in those cattle being turned away.

### **(iii) Rewarding responsible cattle movements through testing costs**

A reward-based system is likely to be ineffective. The Risk Based Trading Group stated in 2013 that if "a voluntary approach was not successful, a mandatory approach must be considered to ensure the success of risk-based trading." This is now long overdue.

Requiring farmers to pay for additional bTB testing due to risky cattle purchasing practices is a step in the right direction; the taxpayer should not be expected to carry this cost. However, this type of disincentive is late in the cattle purchasing process and could be considered to be 'shutting the door after the horse has bolted'.

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

#### **(i) Requiring isolation of purchased cattle pending results of a negative post- movement test**

This is urgent.

According to the DEFRA 2019 Survey, only half of purchasing farmers isolate bought cattle, and 17% never isolate them from the herd on arrival.

All cattle farms should have an isolation area for imported animals and for animals that become ill on the farm as a matter of minimum basic cattle hygiene practice.

The government states that, "Every year, pre- and post-movement bTB tests detect about 8% of all newly infected cattle herds in England' (5.2).

Under the current system post-movement testing can take place up to 120 days after cattle arrive at the destination farm. The SICCT skin test used for pre-movement testing is only 50%-80% sensitive, meaning the potential for spreading the disease is dangerously amplified if newly imported cattle are allowed to mingle with the existing herd.

#### **(ii) Restricting movements to herds of lower bTB risk status**

This is long overdue and should be urgently implemented.

This measure would be dependent on the APHA bTB risk score system being evolved into a fully developed Risk Based Trading (RBT) scheme.

If this were combined with a fully developed system incorporating the LIS and ibTB into a user-friendly interface (see Option 1 response) it would be possible for farmers to find cattle to buy or customers to sell to that were permitted under the system.





## Section one: Cattle movements

### **(iii) Restricting movements between defined zones or risk areas**

This proposal is long overdue and it is difficult to understand why it is only now being proposed. Whilst overall incidence of bTB has peaked and shown a small reduction in the last two years (\*) it is still spreading into the Edge Area (EA) and the Low Risk Area (LRA) (\*).

Cattle should always be allowed to be moved into a higher risk area but never out of it.





## Section two: New approaches to improve the sensitivity of TB movement testing of cattle

**DEFRA: 4. We would welcome views on these options and their potential impact.**

**Please include any information or evidence you feel could be relevant to inform our assessment and decisions. If possible, can you please consider:**

- *The potential benefits and risks with these options.*
- *The practical deliverability of the options outlined.*
- *Factors that are potentially missing from the options.*
- *The most appropriate combination of these options.*
- *Implications for your business or those that you support (if applicable).*

### **Badger Trust: Option 1: Wider use of severe interpretation of the comparative skin test**

The severe interpretation should be used for all skin tests, given the lack of sensitivity in the SICCT skin test. It has been known since at least 2013 (Godfray et al 2013 <https://royalsocietypublishing.org/doi/10.1098/rspb.2013.1634>) that the sensitivity can be as low as 49% at standard interpretation. This would equate to one-in-two to one-in-five (50%-20%) infected animals missed.

The specificity is very good at 1:65,000 (6.4) meaning that it is very rare and that all previously considered 'inconclusive reactors' should be considered test positive. From a disease prevention perspective, false positives are always better than false negatives.

The costs are covered by compensation for the farmer. The overall benefit in disease prevention is worth paying for in the short-term for the long-term gain for both farmers and the taxpayer.

### **Option 2: Use of bovine only interpretation of the comparative skin test**

As so much of the financial burden is placed on the taxpayer in the form of paying for the tests and for the compensation, both severe interpretation and bovine only interpretation for the SICCT test should be adopted.

The financial benefit and the speed at which action is taken is key to the success of the overall bTB eradication policy. When longer test intervals are combined with low sensitivity of the interpretation, bTB has more time to spread and develop. Bearing down on the disease hard and fast means that infected cattle are removed before they have a chance to either pass the disease on to other cattle or to be moved to a new herd or location where they may create a new herd breakdown.

The cost of quickly removing an animal, even if it turns out to be not infected, compared to the cost of dealing with a new breakdown somewhere else should be considered a cost saving. The cost of quickly removing one animal within a herd is far less than allowing it to remain there while it infects many others that will need to be removed and compensated for later on.





## Section two: New approaches to improve the sensitivity of TB movement testing of cattle

### Option 3: Supplementary blood testing

Supplementary blood testing (with IFN- $\gamma$  or other OIE-validated antibody blood tests) as laid out in this option refers only to post-movement testing and only if paid for by the new owner of the cattle. This is not enough to have any significant impact on the problem.

Voluntary measures will not be taken up by farmers. Only 4% of farmers will carry out testing that is not statutorily required and 86% stated that they would only do so if it was mandatory<sup>3</sup>. These measures need to be mandatory to be effective.

IFN- $\gamma$  or other OIE-validated antibody blood tests should be used for all pre- and post-movement testing because cattle movements are the primary driver of the spread of bTB to new herds around the country.

It is currently possible to import cattle into the LRA from the HRA using a routine surveillance SICCT test at standard interpretation as a pre-movement test, and for 120 days to elapse before another SICCT test at standard interpretation is used as a post-movement test. In all that time there is no statutory requirement for the cattle to be isolated at the receiving farm. There is no requirement for either the seller or purchaser to practice any risk-based trading techniques or even refer to any of the ibTB information.

An IFN- $\gamma$  test would ensure the best possible risk mitigation before any animal left the farm. Mandatory isolation at the receiving farm would ensure that any infected animals the pre-movement test had missed were not able to pass bTB onto the receiving herd. A further IFN- $\gamma$  post-movement test would ensure the best possible protection.

Not allowing animals to leave the HRA at all, or to move from the EA to the LRA, would immediately stop further spread of the disease to the lower risk areas.

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

Suspending movements in the event of an inconclusive reactor (IR) should be implemented immediately. It is well known that IRs are infected due to the exceptional specificity of the SICCT even at standard interpretation.

As soon as any reactor is detected the whole herd should be screened at the earliest opportunity with IFN- $\gamma$ .

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

Amending the validity of a pre-movement test from 60 to 30 days is welcomed as it will concentrate the seller's mind on whether or not trading is a good idea at a given time.

Under the current system it is possible to use routine surveillance tests as a substitute for a pre-movement test, which may encourage impulse trading of small numbers of cattle during the 60-day window.

<sup>3</sup> Farm Practices Survey (Autumn) 2019 - England, DEFRA, 2019.







## Section two: New approaches to improve the sensitivity of TB movement testing of cattle

The cost of IFN- $\gamma$  testing must be accepted if the government wishes to make any progress towards eradicating bTB before 2038. Currently the policy is so ineffective that the amount of money being spent in terms of compensation and other costs is unsustainable given the lack of results.

The percentage of the national herd in England that was not Officially TB Free (OTF prevalence) in 2010 is still substantively at the same levels now, having peaked in 2018.

2010 - 4.60%

2018 - 6.03%

2020 - 5.00%

\* There has been an 8% reduction in the overall number of herds since 2012.

(<https://researchbriefings.files.parliament.uk/documents/SN06081/SN06081.pdf> and [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/967680/bovinetb-statsnotice-Q4-quarterly-10mar21.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/967680/bovinetb-statsnotice-Q4-quarterly-10mar21.pdf))

If this rate of progress is maintained there is a risk that the disease will become permanent along with the costs. Investing in IFN- $\gamma$  and any better testing methods as they emerge is vital.

The assertion that there aren't enough labs to conduct the testing is at best obsolete given the number of labs currently processing Covid tests. It is simply a matter of engaging these labs to do the work. The investment in short-term costs will be repaid by medium- and long-term savings.

The government must apply the best possible methods to prevent bTB moving around the country. This means more frequent and more effective cattle testing, and applying the precautionary principle to moving cattle.





## Section 3: Assessing the costs and benefits of alternative statutory testing regimes for bTB breakdown herds

**DEFRA: 5. We would welcome views on these options and their potential impact.**

**Please include any information or evidence you feel could be relevant to inform our assessment and decisions. If possible, can you please consider:**

- *The potential benefits and risks with these options.*
- *The practical deliverability of the options outlined.*
- *Factors that are potentially missing from the options.*
- *The most appropriate combinations of options.*
- *Implications for your business or those that you support (if applicable).*

**Badger Trust: 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- $\gamma$  herd test.**

The basis for suggesting this option is for those situations 'where the infected herd was not eligible (or the owner did not wish to wait) for a government-funded IFN- $\gamma$  test' (7.11). It is suggested that this proposal will be voluntary.

As previously stated, 86% of farmers will not carry out additional, private testing. It is surprising therefore, that given that DEFRA carried out the survey, it still considers voluntary testing rather than mandatory to be worthwhile.

Government needs to invest in the testing capacity of APHA (or even private providers) to make sure the best tests are done at the best possible time by all farmers.

Issues around compensation need to be addressed by the government to make sure they apply to everyone fairly. Expecting farmers to pay privately for tests that prevent them claiming compensation later (without other statutory tests) is not an incentive to do the right thing.

**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- $\gamma$  testing may already be authorised. This would include rapid re-testing 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.**

All the points raised in answer to Option 1 above apply to Option 2. Providing a third and fourth test to the range of tests used in combination may be a benefit in certain circumstances but this should be at the discretion of the relevant authorities should the government opt to create the powers and structures needed to operate a system of local bTB management for each area or even at farm level e.g. managed health plans as set out in Section six.





## Section 3: Assessing the costs and benefits of alternative statutory testing regimes for bTB breakdown herds

### **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).**

Long Term Breakdown (LTB) farms and their farmers are the fundamental driver of the spread of bTB. They must be the focus of the government's attention, rather than waiting until after 'a full cost-benefit analysis to address the issue'. The government is aware that 'such herds also account for a significant proportion of Defra's spend on TB testing and compensation' (10.2) so clearly there is a pressing need for investment and reform.

These farms and their farming practices need to be urgently studied in detail, and compared with other farms, particularly those that have never suffered a bTB breakdown. This should involve close scrutiny of farmer behaviour and attitudes along with the epidemiological environment created at these locations.

LTB farms are necessarily going to be on the bottom tier of any rigorous Risk Based Trading scheme and restrictions on their trading vigorously imposed.

Special attention needs to be applied to the environmental contamination of these farms and what role that plays in the persistence of bTB infection.

The same attention to bio-security needs to be applied to LTB farms as it is to Approved Finishing Units (AFUs)

([https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/668551/guidance-tb131e.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/668551/guidance-tb131e.pdf)).

Following the application of slurry to the land or reapplying for OTF status the farm must be cleared of all cattle and left ungrazed for 60 days. However, Barbier et al 2016 concludes that worms can continue to maintain bTB for 60 days, which was the cut-off point for the experiment. This implies it could well be longer and the fact that bTB can be cultured from soil samples after a year (Ghodbane et al, 2014 <https://www.microbiologyresearch.org/content/journal/micro/10.1099/mic.0.073379-0#r24>) or even 15 months (Young et al, 2005 <https://aem.asm.org/content/71/4/1946>).





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

**DEFRA: 6. We would welcome views on this option and its potential impact.**

**Please include any information or evidence you feel could be relevant to inform our assessment and decisions. If possible, can you please consider:**

- *The potential benefits and risks with this option.*
- *The practical deliverability of this option.*
- *Factors that are potentially missing from the option.*
- *Implications for your business or those that you support (if applicable).*

**Badger Trust:** Any further testing will always be a positive benefit to the policy of eradicating bTB from cattle. The costs and average likely uptake of c.6k cattle per year needing this test make it good value for money given that Long Term Breakdown (LTB) herds play such a significant role in the spread and maintenance of bTB within the national herd. As with all aspects of the bTB eradication strategy, investing now will save money later.

The reliance on the SICCT skin test, even at severe interpretation, is a primary cause of infected animals being able to leave such farms undetected.

IFN- $\gamma$  tests should be used for both routine surveillance testing and pre-/post-movement testing from LTB farms for at least a year after they regain OTF status. This is because any LTB farm will not only have dispersed infection within the herd but also there will be potential for excessive environmental contamination of the farm environment.

It is concerning that OTF status is subject to only two short interval tests at 60-day intervals. This is at odds with the EU standard (two clear tests six months apart over 12 months) which, in theory, the UK should have been applying up until leaving the EU in 2020. 120 days is not sufficient time for any latent infections to show up with the SICCT test or for the broad spectrum contamination of the farm to have abated given the known persistence of bTB in the environment (Barbier, Ghodbane, Young et al etc.). This is particularly important where AFUs wish to regain OTF status as the environmental contamination there may be deeply ingrained.





## Section five: differentiation of compensation based on herd owners' implementation of basic ("no regrets") bovine TB biosecurity measures

**DEFRA: 7. We would welcome views on this option and its potential impact.**

**Please include any information or evidence you feel could be relevant to inform our assessment and decisions. If possible, can you please consider:**

- *The potential benefits and risks with this option.*
- *The practical deliverability of this option.*
- *Factors that are potentially missing from the option.*
- *Implications for your business or those that you support (if applicable).*

**Badger Trust:** The government should not be rewarding good behaviour but ensuring that bad behaviours are not rewarded, and that regulations are set and enforced.

There are significant costs to the taxpayer and the environment that could be prevented if better testing, risk based trading and sound biosecurity were mandatory. Risky behaviour should be unacceptable and sensible practice (best practice) should be expected, not rewarded. Government must not forget the many millions of taxpayers money already spent in culling hundreds of thousands of a much loved protected species.

It is not fair for the better farmers or the taxpayer to have to subsidise poor performance.

The suggestion at 9.6 in the documents that 'herd owners who meet basic biosecurity standards should continue to receive full compensation' (government response to the Godfray Review 2018) is the wrong approach. Basic biosecurity standards should be a minimum requirement for any compensation at all. Failure to meet these standards should result in no compensation. The same should apply to risky trading practices.

The DEFRA 2019 Farming Practices Survey shows that only a small percentage of farmers have implemented recommended biosecurity practices.

Worse, between one-fifth and one-third of farmers have stated that they would never implement them.

The government further states (9.6) that it does 'not rule out' the possibility of paying higher rates of compensation on the basis that the likelihood of a TB breakdown in herds that meet basic biosecurity 'is lower' and likely to be 'less severe'. This approach is wrong. The government must properly inform the farming industry of what it needs to do and set up a system where non-compliance leads to non-payment.

In paragraph 9.7 it is suggested that the proposed new scheme 'will include meaningful, but practical and proportionate, biosecurity measures that every herd owner should be able to achieve without significant cost, time or effort...' This approach is wrong. Time and effort are exactly what are required to get to grips with bTB in cattle.

There is no suggestion in the Call for Views of how the government will monitor and enforce any standards it wants farmers to adopt or who will pay for it.





## Section six: Herd Health Plans for persistent TB breakdown herds

**DEFRA: 8. We would welcome views on this option and its potential impact.**

**Please include any information or evidence you feel could be relevant to inform our assessment and decisions. If possible, can you please consider:**

- *The potential benefits and risks with this option.*
- *The practical deliverability of this option.*
- *Factors that are potentially missing from the option.*
- *Implications for your business or those that you support (if applicable).*

**Badger Trust:** The government is targeting a basic common-sense remedy only at farms that have suffered persistent or long-term breakdowns (LTB herds), on the basis that such herds 'account for a significant proportion of Defra's spend on TB testing and compensation' (10.2).

The government seems to understand the importance of these measures but is not proposing to make them mandatory. Given that so many farmers 'hope' they won't get a breakdown (Defra review of cattle purchasing behaviour - ZF0532 Endicott et al, 2020) and too few farmers implement basic biosecurity, it seems unlikely that anything will be achieved through this proposed measure. Herd health plans should be proactive rather than reactive and be developed for all cattle farms.

bTB advice (including health plans) should be universal rather than only applied after a breakdown, when it's too late.

It is also concerning that the proposed health plans are envisaged to be created in only a very few hours and only by local private vets. The relationship between farmer and vet is one of client and contractor, which creates a potential conflict of interest.

Health plans must be preceded by a comprehensive training programme for vets from Defra/APHA scientists to make sure they are giving advice based on sound epidemiology only.

