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www.gov.uk/apha

Our Ref: ATIC2145

{By Email}
16 September 2020
Dear

PROVISION OF REQUESTED INFORMATION

Thank you for your request for information on bTb testing which we received on 26 August 2020. Your request has been handled under the Freedom of Information Act 2000 (FOI).

The information you requested and our response is detailed below:

"Where relevant please provide the last five years data to all questions. Assuming you don't have full results for 2020 I would expect this to be 2014 to 2019."

"Please can you tell me when the skin test that is currently used to Identify TB in bovines came into use.

How long it was tested for prior to coming into use and How it was tested. And why you can be sure it is 99.98% accurate."

The single intradermal comparative cervical tuberculin (SICCT) test was developed, refined and first deployed in GB in the 1940s. The test technique itself has hardly changed over the years, but the antigens (tuberculins) injected into the skin of cattle have been improved. Further trials were carried out throughout the UK and Ireland in the 1970s to compare the accuracies of 'human' (*M. tuberculosis*) and 'bovine' (*M. bovis*) tuberculins for testing cattle, before the former antigen was replaced with the later. The results showed that a comparative tuberculin test using avian tuberculin with either human or bovine PPD had a much higher efficiency than a single injection of mammalian tuberculin in the neck of cattle, and confirmed that a comparative (SICCT) test was essential in the British environment. In the period 2005-2009 avian and bovine tuberculins produced in the UK (Weybridge) were replaced with similar reagents produced in The Netherlands (Lelystad). For more information see:

Good M, Bakker D, Duignan A and Collins DM (2018). The History of *In Vivo* Tuberculin Testing in Bovines: Tuberculosis, a "One Health" Issue. *Front. Vet. Sci.* 5:59. doi: 10.3389/fvets.2018.00059

https://www.frontiersin.org/articles/10.3389/fvets.2018.00059

APHA is an Executive Agency of the Department for Environment, Food and Rural Affairs and also works on behalf of the Scottish Government, Welsh Government and Food Standards Agency to safeguard animal and plant health for the benefit of people, the environment and the economy.

Test accuracy is a combination of diagnostic sensitivity and specificity. The current SICCT test at standard interpretation has an estimated average specificity of 99.98% in the British cattle population, based on a relatively recent epidemiological analysis of surveillance data from TB-free herds in low incidence regions of the country. For details of that study see:

Goodchild, AV, Downs, SH, Upton P, Wood JLN & de la Rua-Domenech R. (2015). Specificity of the comparative skin test for bovine tuberculosis in Great Britain. Veterinary Record doi: 10.1136/vr.102961

https://veterinaryrecord.bmj.com/content/vetrec/177/10/258.summary.pdf

https://veterinaryrecord.bmj.com/content/vetrec/177/10/258.full.pdf

"Also please can you confirm if there is any back testing done against that test (via real life cases) and if the results of this back testing continue to Support the 99.98% accuracy rating.

If there is back testing done please can you also give me full Details on how the back testing is conducted and the numbers of cows involved."

The Animal and Plnat Health Agency (APHA) do not re-test animals that are deemed reactors (positive) to the SICCT test and hence highly likely to be infected with TB by virtue of the test's very high specificity. Post mortem meat inspection of those animals in the slaughterhouse is carried out for public health (food hygiene) reasons and to obtain tissue samples for bacteriological culture and DNA typing of *M. bovis* isolates, rather than negate or validate the ante-mortem test results.

"Also please can you also tell me the number of cattle that are tested each year In the UK and how many of them reacted and how many of them were clear and how many of them were inconclusive."

Annual numbers of cattle tested, reacting to the test, etc. in GB are all included in the detailed statistical dataset (tables) that are published by Defra alongside the monthly bovine TB statistics releases. The Department of Agriculture, Environment and Rural Affairs (DAERA) publish their own bTB statistics for Northern Ireland (NI) independently from APHA/Defra's (GB).

https://www.gov.uk/government/statistics/latest-official-statistics-on-tuberculosis-tb-in-cattle-in-great-britain-monthly

https://www.daera-ni.gov.uk/publications/tuberculosis-disease-statistics-northern-ireland-2020

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"I would also like to know how much the cost of testing animals is per annum including the cost of removing the animal and the cost of compensation paid out for these animals. And the cost of any further testing that is done on the animals that are removed - be that blood testing cultures anything else. I am looking for the total cost of testing and dealing with Tb in bovines in the UK per annum. Please include any other costs I have not specifically asked for but you know that exist."

Annual costs of the TB skin testing programme for cattle in England are approx. £30 million, plus £32 million in compensation payments to animal keepers (£22 million after salvage receipts to the Department of the Environment, Food and Rural Affairs - Defra). The information for Wales, Northern Ireland and Scotland are separate devolved responsibilities (and budgets) for animal health policies.

Please see full breakdown of compensation and salvage for England in figures 1 and 2 below:

Figure 1 – Compensation

	£ 161,721,316.97	£161.7M
FY1920	£ 31,406,864.65	£31.4M
FY1819	£ 33,978,941.09	£34.0M
FY1718	£ 37,352,867.68	£37.4M
FY1617	£ 29,486,675.45	£29.5M
FY1516	£ 29,495,968.10	£29.5M
	£	£x.xM

Figure 2 - Salvage

	£	£x.xM
FY1516	-£ 8,820,812.39	-£8.8M
FY1617	-£ 9,436,192.06	-£9.4M
FY1718	-£ 11,652,384.11	-£11.7M
FY1819	-£ 8,842,986.81	-£8.8M
FY1920	-£ 8,728,837.16	-£8.7M

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-£ 47,481,212.53 -£47.5M

"Regarding the possible vaccination for cattle that you are currently validating. Please can you provide the approximate cost per animal. And the approximate number of cattle in the UK (As of the latest figures available to you)."

It is too early for Defra and APHA to come up with a reliable estimate of the unit cost of vaccinating cattle against TB – we do not know yet whether the planned field trials will prove successful and the cattle bacille Calmette-Guerin (BCG) vaccine (and allied Differentiating Infected from Vaccinated Animals (DIVA) test will eventually gain marketing authorisations in the UK.

For the annual numbers of cattle in England and the UK, see the statistical data series from the UK agricultural survey:

https://www.gov.uk/government/statistical-data-sets/structure-of-the-agricultural-industry-in-england-and-the-uk-at-june

Information disclosed in response to this FOI request is releasable to the public. In keeping with the spirit and effect of the FOI and the government's Transparency Agenda, this letter and the information disclosed to you may be placed on GOV.UK, together with any related information that will provide a key to its wider context. No information identifying you will be placed on the GOV.UK website.

An Annex is attached which explains the copyright that applies to the information being released to you and contact details should you be unhappy with the service you have received.

If you have any queries about this letter, please contact the Access to Information Team at the email address below. During the current Coronavirus outbreak, our offices will be closed.

Yours sincerely

ACCESS TO INFORMATION TEAM

Email: enquiries@apha.gov.uk

Annex

Copyright

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Complaints

If you are unhappy with the service you have received in relation to your request, you may make a complaint or appeal against our decision under section 17(7) of the FOIA or under regulation 11 of the EIRs, as applicable, within 40 working days of the date of this letter. Please write to the Access to Information Manager at the address at the top of this letter or email enquiries@apha.gov.uk and the team will arrange for an internal review of your case.

If you are not content with the outcome of the internal review, section 50 of the FOIA and regulation 18 of the EIRs gives you the right to apply directly to the Information Commissioner's Office (ICO) for a decision. Please note that generally the ICO cannot make a decision unless you have first exhausted APHA's own complaints procedure. The ICO can be contacted at:

Information Commissioner's Office Wycliffe House Water Lane Wilmslow Cheshire SK9 5AF

Coronavirus

However, following the changes to Government advice, from Tuesday 24 March 2020 the ICO offices will be closed. They will therefore not be able to collect correspondence sent via post. Where possible, they ask that you contact them online or call on 0303 123 1113