----Original Message-----

From: xxxxxxxxx

Sent: 18 April 2012 16:57 To: DEFRA (E-mail)

Subject: Bovine TB: Trapping of badgers for vaccination

Dear Sir/Madam,

If you can, please provide me with the following information perhaps drawing on the experience described in Reference 1.

- (a) For a given badger vaccination trial conducted in the UK, the total number of times a badger has been found caught in a cage during the trial.
- (b) Out of these times, the number of times a badger was released without being vaccinated to avoid unnecessary repeated vaccination.
- (c) The minimum age of badgers which are caught in cage traps in significant numbers judging by their size or any other metric.

Numbers given in (a) and (b) must be linked and consistent because I would like to use these numbers to estimate how big the problem is of catching the same badger more than once. If vaccination operations are repeated more than once in any given year and area, please give an indication of the potential (if any) for these numbers underestimating the scale of the problem due to the rate at which identification markings applied to badgers wear off.

The final report of the RBCT differentiates the age of badgers caught in cages by whether the badger is an adult or a cub (i.e. up to 12 months of age). I am looking for additional information which will give a better insight into the age range of badgers which will be left largely unvaccinated.

A response by email will be fine.

Yours faithfully,

Reference

1. www.fera.defra.gov.uk/wildlife/ecologyManagement/bvdp/index.cfm

14 May 2012 Our Ref: DWOE000268593

Further to your email of 18 April 2012 to the Department for Environment Food and Rural Affairs, I should like to confirm that this was transferred to the Food and Environment Research Agency and we can now respond to your request. You asked the following:

If you can, please provide me with the following information perhaps drawing on the experience described in Reference 1.

- (a) For a given badger vaccination trial conducted in the UK, the total number of times a badger has been found caught in a cage during the trial.
- (b) Out of these times, the number of times a badger was released without being vaccinated to avoid unnecessary repeated vaccination.
- (c) The minimum age of badgers which are caught in cage traps in significant numbers judging by their size or any other metric.

Numbers given in (a) and (b) must be linked and consistent because I would like to use these numbers to estimate how big the problem is of catching the same badger more than once. If vaccination operations are repeated more than once in any given year and area, please give an indication of the potential (if any) for these numbers underestimating the scale of the problem due to the rate at which identification markings applied to badgers wear off.

The final report of the RBCT differentiates the age of badgers caught in cages by whether the badger is an adult or a cub (i.e. up to 12 months of age). I am looking for additional information which will give a better insight into the age range of badgers which will be left largely unvaccinated.

A response by email will be fine.

Reference

www.fera.defra.gov.uk/wildlife/ecologyManagement/bvdp/index.cfm

I have now consulted the relevant Fera scientists and they have provided me with the following response:

Clarification of the questions:

Question (a) defined as the total number of badger captures.

Question (b) defined as the total number of known occasions when a previously trapped badger was recaptured.

This information can be found in the table below.

Sand Hutton, York YO41 1LZ, UK Tel: +44 (0)1904 482 000 Fex: +44 (0)1904 482 111 E-meil info@fers.gol gov.uk www.defra.gov.uk/fers

Fere is an Executive Agency of Defra



Table 1. Summary trapping data from the Badger Vaccine Deployment Project (BVDP) for 2010 and 2011.

	A	В	A-B	Total number of age class vaccinated		
Year	Total number of badger captures	Total number of badgers vaccinated	Total number of previously vaccinated badgers trapped	Adult	Cub	Unknown
2010	636	541	95	382	132	27
2011	759	628	131	452	150	. 26
Total	1395	1169	226	834	282	53

Question (c): Answer provided above. We are not able to provide the minimum age of badgers trapped. Badger cubs grow at different rates, therefore size can only provide a rough guide as to cub age. Therefore, in the badger vaccination work, age classes are broadly defined as cub, adult and unknown and are based on a visual assessment of size, made by the lay vaccinator. Based on weights of cubs trapped during other longitudinal research studies, we would expect the minimum age that cubs are trapped is between 7-12 weeks, which is the age cubs first emerge from the sett and when weaning begins.

"...catching the same badger more than once." & "underestimating the scale of the problem due to the rate at which identification markings applied to badgers wear off."

There is no problem of trapping a badger more than once. Trapping operations are carried out annually, i.e. a sett is only trapped once a year, and setts are only trapped for a period of 2 nights for welfare reasons. A technique called saturation trapping is used, where enough traps are set to catch the total numbers of badgers estimated to be at that sett.

The purpose of marking vaccinated badgers, is to readily identify previously vaccinated badgers on the 2nd of the two trap nights and prevent the unnecessary repeat use of BadgerBCG. Vaccinated badgers are marked with a fur clip and stock marker. Previously vaccinated badgers, as identified by this mark are released without repeat vaccination. The duration fur clips will remain visible is variable, depending on the time of year in relative to the moult cycle, which is likely to vary between individuals and across seasons. However, fur clips can remain visible for months. Stock marker usually only remains visible for a few days. Hence the figures provided in Table 1 do not underestimate the number of previously vaccinated badgers trapped in any given year.

However, it is not feasible to permanently mark badgers in this project, as it would require anaesthesia and tattooing of trapped badgers, involving Home Office licensing and substantial additional resources and cost. It was decided early in the planning process for this work that the available resources were best deployed in maximising the number of badgers vaccinated. Vaccinating badgers more than once over the duration of the BVDP is not an issue on welfare grounds.

Sand Hutton, York YO41 1LZ, UK Tel: +44 (0)/1904 462 000 Fex: +44 (0)/1904 462 111

E-meil info@fers.gol.gov.uk www.defre.gov.uk/fere

Fers is an Executive Agency of Defra



"...age range of badgers which will be left largely unvaccinated."

It is not possible to fully answer this question. BVDP trapping operations are carried out from May to November to maximise the proportion of cubs vaccinated. Studies involving repeated cage trapping suggest that the probability of capture is greater for cubs than for adults.

I hope that you will find the above information useful.