Summary of Consultation Responses to TB Strategic Partnership Group Interim Report

June 2015



TB Strategic Partnership Group Interim Report

A Consultation

June 2015

1. Introduction

- 1.1. In its initial Public Consultation of December 2014, the TBSPG sought views from all parties who had an interest in TB eradication and asked how they considered it would be possible to reduce: the incidence of TB in cattle; its impact on the farming industry; and the cost of the eradication programme.
- 1.2. In its subsequent Interim Report of June 2015, the TBSPG presented the results of its initial consultation as informed by subsequent related evidence gathering and meetings with industry stakeholders, representative organisations and veterinary and scientific experts.
- 1.3. Next, in its allied public consultation on its Interim Report over the summer months of 2015, the TBSPG sought views on the most efficient and pragmatic actions required to achieve the greatest reduction in the level and cost of TB in the shortest possible time.
- 1.4. The consultation ran from 30 June to 4 September 2015 and replies were sought to a range of questions under 8 distinct thematic categories.
- 1.5. There were a total of 28 respondents, of which 6 were on the part of the farming industry's representative bodies, 6 were on the part of conservationists and environmentalists, 9 were on the part of the veterinarian representative organisations, other veterinarians and the Agri-Food and Biosciences Institute (AFBI), and 7 were private individuals. These are all listed by sector in alphabetical order in the Appendix. The responses were analysed and categorised under the 8 thematic categories and they are summarised in the Summary Table below. Most respondents provided comments on more than one thematic category.

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1.6. All responses were reviewed by the TBSPG in September and October 2015. An overview of the main points and suggestions made under the 8 thematic categories by the respondents by sector is provided below.

2. Culture and Communication

- 2.1 In terms of the main barriers to TB eradication facing all stakeholders, it was noted that:
 - (a) From the perspective of the industry, the main barriers highlighted were:
 - (i) lack of knowledge;
 - (ii) general distrust of DARD by farmers (which leads to their discounting the information provided them); and
 - (iii) overall poor communication of the required knowledge and information.
 - (b) From the perspective of the conservationists and environmentalists, it was highlighted that there appears to be a culture of denial on the part of farmers whereby they:
 - (i) dismiss scientific evidence in favour of myths and scapegoats, e.g. in their support for badger culling;
 - (ii) are reluctant to accept that cattle to cattle infection drives the incidence of TB: and
 - (iii) refuse to accept that infection control has anything to do with farm practice.
 - (c) From the perspective of the veterinarian representative organisations, veterinarians and AFBI, it was highlighted that the main barrier may be the TB Eradication Programme itself whereby there is:
 - (i) an attitude of resignation on the part of stakeholders and a lack of belief in the Programme (particularly given the length of time that it has been in operation and its slow rate of progress);
 - (ii) an allied attitude of disengagement on their part; and
 - (iii) a need therefore to bring about a marked shift in attitudes for them to be re-engaged in the development and implementation of a revised Programme.
 - (d) From the perspective of the private individuals, it was contrastingly highlighted that the main barriers were as follows:

- (i) the perceived dictatorial culture of the Veterinary Service that seems more focused on penalising farmers rather than engaging in partnership with them; and
- (ii) the attitudinal mind-set of some farmers that betrays a reluctance to consider that control of infection could be associated with traditional farm practice.
- 2.2 In terms of developing a local partnership approach as the most effective way to develop the constructive engagement necessary to overcome the highlighted barriers, it was noted that:
 - (a) From the perspective of the industry, there was agreement on such an approach provided that:
 - (i) the proposed local groups did not become a means for DARD to force its policies on farmers; and
 - (ii) afforded instead an effective two-way communication channel for taking farmers' suggestions and concerns on board.
 - (b) From the perspective of the conservationists and environmentalists, there was some agreement on such an approach provided that there was an emphasis on its being a non-confrontational collaborative process based on objective science (with AFBI and QUB having key roles to play).
 - (c) From the perspective of the veterinarian representative organisations, veterinarians and AFBI, there was wide agreement on such an approach being an effective way to overcome the barriers of:
 - (i) an attitude of resignation;
 - (ii) limited local knowledge;
 - (iii) lack of local engagement; and
 - (iv) the need for the effective explanation and communication of complex scientific and epidemiological information on TB.
 - (d) From the perspective of the private individuals, no comments were made, other than a simple "No".
- 2.3 In terms of how farmers and private vets might take greater responsibility for TB eradication, it was noted that:
 - (a) From the perspective of the industry, there was an apparent degree of reluctance to take on such greater responsibility from a concern and fear that attention would be deflected from DARD's failure to eradicate TB.

- (b) From the perspective of the conservationists and environmentalists, it was suggested that:
 - a more pro-active culture on the part of farmers could be incentivised by linking best practice and effective compliance to compensation and crosscompliance payments;
 - (ii) the full implementation of on-farm biosecurity measures would yield significant benefits (with farmers, vets and DARD advisors working closely together to ensure good practice); and
 - (iii) the possible implementation of the Welsh Cymorth TB programme should be investigated whereby publicly funded private vets provide tailored biosecurity advice and information on how to clear up any TB break-down as quickly as possible.
- (c) From the perspective of the veterinarian representative organisations, it was suggested that:
 - (i) vets and farmers could be actively engaged in the development of biosecurity protocols, trading practices and badger control (whether culling or vaccinating) by means of a so-called TB Plus programme;
 - (ii) an incentive scheme could be developed for pro-active farmers whereby they might be accredited with some form of superior TB-free status leading to their securing a price premium in the sale of stock;
 - (iii) new sources of funding farmers for biosecurity improvements could be explored whereby they could pay their local vets for undertaking an enhanced role in the provision of such biosecurity information and advice; and
 - (iv) information on the location of TB break-down herds should be shared in both list and map format.
- (d) From the perspective of the private individuals, no specific comments were made, other than a simple "Not a runner".
- 2.4 In terms of how to develop stronger engagement, raise awareness and create a more pro-active culture around TB eradication, it was noted that:
 - (a) From the perspective of the industry, it was suggested that:
 - (i) DARD needs to be more open and transparent in providing access to related TB research and results;
 - (ii) a greater emphasis needs to be placed on education and effective communication with farmers;

- (iii) such education and effective communication may well be best accomplished by the establishment of suggested local animal health committees or by having experts whose job is to attend farmer meetings to give presentations on TB;
- (iv) clear information needs to be provided on topics such as: the accuracy of the current testing regime; long term disease trends; disease transfer within cattle and wildlife; concurrent infections;
- (v) the cost of TB; farming practices in other parts of the world; and local options available for control;
- (vi) livestock courses at CAFRE could include a detailed module on TB covering the same areas to better educate new farming entrants; and
- (vii) a series of newspaper articles breaking the final consultation document into smaller 'bite-sized' chunks for weekly reading may be a better way of disseminating information to the wider farming community and encouraging broader industry discussion.
- (b) From the perspective of the conservationists and environmentalists, it was suggested that:
 - (i) a vigorous publicity campaign around farm biosecurity measures and procedures would be fully supported;
 - (ii) any research undertaken should be closely linked to the communication of related difficult or controversial ideas in understandable and acceptable ways by a neutral third party ("honest broker"/"knowledge broker"), possibly through local animal health committees;
 - (iii) investment in a deeper relationship between vets and farmers would help bring about a more pro-active approach to biosecurity as per the Welsh *Cymorth TB* programme; and
 - (iv) once measures or procedures are changed, a variety of tools should be used to communicate them clearly and efficiently to farmers.
- (c) From the perspective of the veterinarian representative organisations, it was suggested that:
 - (i) changing mind-sets and developing best practice through publicity campaigns and local action groups will work only once the programme has been developed with the stakeholders in such a way that there is a sense of ownership of it;
 - (ii) if a proactive culture is to be created around TB eradication then a radical new approach to testing methodology or the introduction of vaccination or

- a game-changing step of that order of magnitude would be the first essential; and
- (iii) a publicity campaign aimed at all stakeholders (including vets) and time spent as part of the TB testing programme talking farmers through best-practice could result in better engagement, awareness and a proactive culture around TB eradication.
- (d) From the perspective of the private individuals, no comments were made, other than a simple "Yes".

3. Governance and delivery

- 3.1. In terms of governance and delivery, it was noted that:
 - (a) From the perspective of the industry on the need for a new system of governance to successfully eradicate TB, their mixed views were:
 - (i) there was no need for another quango;
 - (ii) there may be benefit in creating an oversight board or TB Eradication Champion (preferably from overseas); and
 - (iii) there was concern that, as long as DARD remains the competent authority on TB here, any change in governance is likely to add bureaucracy and cost (with any suggestions ultimately being subject to their approval or rejection).
 - (b) From their perspective on increased industry strategic level involvement being accompanied by cost and responsibility sharing with government, their mixed views were:
 - (i) qualified agreement, provided they were convinced that they would be listened to and could have real input to, and influence on, decisions; and
 - (ii) opposition to creating an oversight board and contributing to its funding in line with the concern expressed at 3.1(a)(iii) above.
 - (c) From the perspective of the conservationists and environmentalists on the need for a new system of governance to successfully eradicate TB, their views were:
 - (i) There was a belief that the current system for governance and delivery is adequate and does not receive the credit it deserves; but its effectiveness might be improved by identifying and addressing weaknesses at the point of implementation, i.e. at herd level.

- (ii) Inclusive, consensus-led policy and delivery should be maintained and developed, with progress being made by pursuing common goals in an atmosphere of mutual understanding and respect.
- (iii) The present system is generally fit for purpose, but its structure is only as strong as its weakest link: compliance is often poor, especially as to infection control which must be addressed.
- (iv) Existing relationships might be considerably enhanced by the introduction of a third party mediating body independent of both industry and DARD and tasked with ensuring that decision making is pragmatic and evidence-based.
- (v) Whilst a variation of the current governance was likely to be suitable, change 'on the ground' (through making funding available for biosecurity measures and biosecurity audits to ensure standards are being met) was preferred to locking up funds in additional formal structures.
- (vi) Any new system must be multi-pronged and include: reducing the opportunities for diseased cattle to be moved (either within the holding or from holding to holding); increasing the frequency of testing and the range of testing methods (the use of alternative tests where a skin test is inconclusive, e.g. Gamma Interferon as a secondary test); and focusing upon the critical time taken to isolate a reactor (e.g. as in Wales where the time taken to isolate reactors has been substantially reduced).
- (d) From their perspective on increased industry strategic level involvement being accompanied by cost and responsibility sharing with government, their views were:
 - (i) Cost-sharing may have its merits but it is crucial that this does not become a barrier to progress, so it must be balanced with incentives if it is not to risk being counterproductive.
 - (ii) An objective arbitration process (independent of the existing industry/DARD dynamic) could be convened to discuss cost-sharing and the prioritising of spending on TB strategy.
 - (iii) Cost-sharing and the cost effectiveness of different options might benefit from objective mediation in line with 3.1(c)(iv) above.
 - (iv) By enforcing a level of compliance amongst its operators, the industry would benefit from improved practice and thus should take on some shared responsibility and costs. Given that tax payers already subsidise agriculture, it would seem appropriate that some of the costs should be shared between industry and government (with one potential way forward being a levy to help fund research into knowledge gaps).

- (v) Given the importance of agriculture to our economy and the island of Ireland having one of the highest cattle densities of Europe, a private/public partnership scenario would be worthwhile.
- (e) From the perspective of the veterinarian representative organisations and AFBI on the need for a new system of governance to successfully eradicate TB, their mixed views were:
 - (i) A system of governance involving a board similar to New Zealand's would: lead to an improved programme and related implementation of it; and improve stakeholders' engagement and give them a greater sense of ownership of it.
 - (ii) Politically, cross-party agreement on badger control would be required to enable any board to pursue its control programme without interference from a changed administration.
 - (iii) There was some scepticism expressed about any changes in governance being necessary, with an oversight board for TB eradication being seen as only a potential talking shop and more bureaucracy to act as a brake on progress.
 - (iv) The idea of appointing a TB Eradication Champion was interesting but totally dependent on finding a candidate with vision, energy and drive.
 - (v) There was doubt that a New Zealand model could be readily adapted to our local circumstances.
 - (vi) An initiative, similar to the New Zealand model board, could include: the creation of a TB Eradication Board reporting directly to DARD; a TB Advisory Service as part of the Rural Development Programme; and the creation of an industry-led non-government body such as Animal Health England.
 - (vii) There would be significant merit in putting in place a new governance structure for inclusive independent oversight of the TB Eradication Programme, with a need for scientific input to the development, monitoring, evaluation and refinement of it.
- (f) From their perspective on increased industry strategic level involvement being accompanied by cost and responsibility sharing with government, their mixed views were:
 - (i) Cost-sharing can only occur once cross-party agreement is reached and the percentage contribution from each stakeholder would need to be discussed (one such model being 50% from DARD and 50% from other stakeholders).

- (ii) Account would need, however, to be taken of any costs incurred by the stakeholders, with the percentage of their contribution being reduced over time, should the disease control programme prove to be successful.
- (iii) Natural justice suggested that the industry should make some financial contribution towards the cost of TB eradication, but any decision on the exact nature and extent of such cost sharing must await the selection of the model of governance most suited to the future of TB eradication.
- (iv) Given this current time of austerity and hardship for the agricultural industry, perhaps any decision on the nature and extent of the industry's contribution to the cost of TB eradication should be deferred until better economic times.
- (v) An increased level of industry involvement at strategic level might give grounds to share cost and responsibility with government, but shifting the responsibility of who pays for disease control or surveillance will not achieve the long term goal of TB eradication on its own.
- (vi) Increased industry involvement at a strategic level should be accompanied by cost and responsibility sharing with government in order to increase a sense of ownership, responsibility and control among the industry for the eradication of TB.
- (g) From the perspective of the private individuals on the need for a new system of governance to successfully eradicate TB, there was one view that full credit should be given to the TVR system currently in place (including any additional improvements that would enhance its effectiveness).
- (h) From their perspective on increased industry strategic level involvement being accompanied by cost and responsibility sharing with government, there was one qualified view in support of it.

4. Existing Tools and Processes

- 4.1. In terms of existing tools and processes, it was noted that:
 - (a) From the perspective of the industry on the specified items (a) to (g), the views expressed were as follows:
 - (i) There was support for a parallel testing regime with INFG to speed up disease control and reduce the potential for disease spread subject to cost/benefit analysis.
 - (ii) There was support for any responsible person making a diagnosis to DNA tag the animal to reduce the risk of inadvertent substitution.

- (iii) There was some support for lay testers, but only if suitably trained and empowered in their own right to confirm reactors.
- (iv) There was no particular support for herds being designated on the basis of risk.
- (v) There was no particular support for having a system of pre-movement testing (owing to the inaccuracy of TB testing and the extra burdens imposed on farmers) and thus no support for farmers having to incur such testing costs.
- (vi) There was some support for the inspection of animal testing being carried out to international inspection standards, but the need for related cost/benefit analysis was highlighted.
- (b) From the perspective of the conservationists and environmentalists on the specified items (a) to (g), the views expressed were as follows:
 - (i) There was general support for a parallel testing regime with INFG to speed up disease control and reduce the potential for disease spread, especially in TB hotspot areas.
 - (ii) There was general support for any responsible person making a diagnosis to DNA tag the animal to reduce the risk of inadvertent substitution.
 - (iii) There was some support for lay testers, subject to their being suitably trained and properly empowered by DARD in line with a robust system of quality assurance to international inspection standards EN4501/ISO 17065.
 - (iv) There was general support for herds being designated on the basis of risk.
 - (v) There was general support for having a system of pre-movement testing as successfully introduced in Wales and some qualified support for farmers having to incur such testing costs.
 - (vi) There was general support for the inspection of animal testing being carried out to international inspection standards as stated at 4.1(b)(iii) above.
- (c) From the perspective of the veterinarian representative organisations, veterinarians and AFBI on the specified items (a) to (g), the views expressed were as follows:
 - (i) There was qualified support for a parallel testing regime with INFG to speed up disease control and reduce the potential for disease spread, subject to a number of considerations (including carrying out further research and cost/benefit analysis of its structured application).

- (ii) There was general support for any responsible person making a diagnosis to DNA tag the animal to reduce the risk of inadvertent substitution.
- (iii) There was some qualified support for lay testers (subject to their being suitably trained, regulated and subject to standards of quality assurance), but not in preference to veterinarians.
- (iv) There was general support for herds being designated on the basis of risk, subject to proper measures being put in place and taking account of comprehensive datasets available to both DARD and AFBI.
- (v) There was general support for having a system of pre-movement testing (subject to some special conacre considerations) and also for farmers having to incur such testing costs.
- (vi) There was general support for the inspection of animal testing being carried out to international inspection standards.
- (d) From the perspective of the private individuals on the specified items (a) to (g), the views expressed were as follows:
 - (i) One was in support of full cattle testing not reliant on the Single Intradermal Comparative Tuberculin Test (SICTT).
 - (ii) Two were in support of any responsible person making a diagnosis to DNA tag the animal to reduce the risk of inadvertent substitution.
 - (iii) Two were in support lay testers.
 - (iv) One was in support of herds being designated on the basis of risk.
 - (v) There were divergent opinions on having a system of pre-movement testing and on farmers having to incur such testing costs.
 - (vi) One was content with the inspection of animal testing being carried out to international inspection standards.

5. Wildlife

- 5.1. In terms of wildlife, it was noted that:
 - (a) From the perspective of the industry on the specified items (a) to (d), the views expressed were as follows:
 - (i) Of the three suggested options to help reduce the reservoir of TB infected badgers, there was no real support for, firstly, a programme of badger vaccination or, secondly, a programme of vaccination and removal of infected badgers (like TVR) owing to the lack of scientific evidence.

- (ii) There was more support for the third option, i.e. a programme of targeted badger removal akin to that in England.
- (iii) Of the three options suggested above for helping to prevent disease exchange between cattle and badger populations, the development of a suitable, cost effective, oral vaccine was viewed as being best able to reduce such disease spread.
- (iv) Given the significant cost of any badger intervention (both in terms of trapping and vaccination) and the matter of how any such intervention might be funded, there was a view that none could currently be justified on cost/benefit grounds to the industry.
- (v) Given the initiation of any such intervention, there was a view that animal welfare and environmental groups could bear some of the costs in conjunction with farmers (who might be willing under certain conditions to support it through paying for one annual herd test per year).
- (vi) Situations providing evidence to support an intervention such as cited were pointed to as being where: two or more herd breakdowns of neighbouring herds occur (a hot spot); a herd has been persistently infected for over a year; and an infection has been introduced to a closed herd.
- (b) From the perspective of the conservationists and environmentalists on the specified items (a) to (d), the views expressed were as follows:
 - (i) Of the three suggested options to help reduce the reservoir of TB infected badgers, there was general support for, firstly, a programme of badger vaccination and some support for, secondly, a programme of vaccination and removal of infected badgers (like TVR).
 - (ii) There was no support for the third option, i.e. a programme of targeted badger removal, given their refusal to accept that there is any clear proven scientific evidence to link the transmission of TB from a reservoir of infected badgers to cattle.
 - (iii) Of the three options suggested above for helping to prevent disease exchange between cattle and badger populations, there was general support for a programme of badger vaccination and also for the vaccination of cattle, with some also emphasising the need for better farm biosecurity and the use of licensed lay vaccinators.
 - (iv) Given the significant cost of any badger intervention (both in terms of trapping and vaccination) and the matter of how any such intervention might be funded, there was a view that costs could be significantly reduced by: licensing lay vaccinators; or adopting a hybrid approach of

combining the expertise of veterinarians with the logistical support of qualified lay volunteers.

- (v) Evidence in support of an intervention such as cited would involve having knowledge of the percentage of any badger social group that is infected with TB and the likely evolution of disease within the group. Euthanizing infected badgers was viewed as humane and responsible.
- (c) From the perspective of the veterinarian representative organisations, veterinarians and AFBI on the specified items (a) to (d), the views expressed were as follows:
 - (i) Of the three suggested options to help reduce the reservoir of TB infected badgers, there was no real support for, firstly, a programme of badger vaccination alone but more support for, secondly, a programme of vaccination and removal of infected badgers (like TVR).
 - (ii) There was no great support for the third option, i.e. a programme of targeted badger removal akin to that in England, mainly owing to its prohibitive expense and temporary nature. Several individual veterinarians emphasised in preference the effectiveness of separating badgers and cattle, e.g. by means of badger-proof fences.
 - (iii) Of the three options suggested above for helping to prevent disease exchange between cattle and badger populations, there was more support on balance for a programme of vaccination and removal of infected badgers (informed in due course by the development of allied research models).
 - (iv) Given the significant cost of any badger intervention (both in terms of trapping and vaccination) and the matter of how any such intervention might be funded, there was a view that costs could be met by both DARD and the industry.
 - (v) Evidence in support of an intervention such as cited would be where cattle and badgers co-exist in the same habitat and TB infection with the same strain of M. bovis can be demonstrated in both respective populations by: TB testing or post mortem detection of lesions; serological or IFNG testing of live badgers; or other identification of M. bovis organisms, e.g. in badgers' faecal samples or from road-kill carcasses.
- (d) From the perspective of the private individuals on the specified items (a) to (d), the views expressed were as follows:
 - (i) Of the three suggested options to help reduce the reservoir of TB infected badgers, one dismissed all, none supported a programme of badger

vaccination alone, and two supported a programme of vaccination and removal of infected badgers (like TVR).

- (ii) One supported the final option of a programme of targeted badger removal akin to that in England.
- (iii) Given the significant cost of any badger intervention (both in terms of trapping and vaccination) and the matter of how any such intervention might be funded, two took the view that costs could be significantly reduced by use of licensing volunteer lay vaccinators, whilst one suggested engagement with local hunters.
- (iv) One suggested that evidence in support of an intervention such as that cited could be sought from the south of Ireland.

6. Vaccination

- 6.1. In terms of vaccination, it was noted that:
 - (a) From the perspective of the industry on the specified items (a) to (f), the views expressed were as follows:
 - (i) There was some support for the vaccination of badgers as an acceptable approach to assist in the eradication of TB in the badger population and cattle, but subject to suitable cost/benefit analysis. Failing such analysis, there was support for targeted removal of infected badgers.
 - (ii) Dissemination of oral vaccine to badgers by farmers was suggested as the best way to deliver such a programme in terms of maximum uptake and savings.
 - (iii) There was support for badger vaccination be carried out in conjunction with a targeted cull of diseased badgers in line with that stated at 6.1(a)(i) above.
 - (iv) It was suggested that any badger vaccination programme should be focused on hot spot areas, areas of pedigree herds and areas of reoccurring/persistent infection, so leading to a reduction in the total cost of TB compensation.
 - (v) It was suggested that a badger vaccination strategy could be administered/delivered more widely as follows: oral vaccination of badgers could be carried out effectively by local farmers as stated at 6.1(a)(ii) above; injectable vaccines could be delivered by suitably licensed persons who are capable of interpreting an animal's TB status and removing it if infected; and, in the absence of such ability, vaccination and/or removal should be completed by a vet.

- (vi) It was suggested that the potential significant additional cost of any agreed badger intervention could be funded by farmers paying for one annual herd test (see 5.1(a)(v) above), provided any such monies were ringfenced to address the removal of infected badgers.
- (b) From the perspective of the conservationists and environmentalists on the specified items (a) to (f), the views expressed were as follows:
 - (i) There was widespread support for the vaccination of badgers as an acceptable approach to assist in the eradication of TB in the badger population and cattle.
 - (ii) It was suggested that such a programme could best be delivered in areas identified as "high risk" or "hot spots" or in areas at risk from becoming such.
 - (iii) There was some support for badger vaccination to be carried out in conjunction with specific targeted culling, but in line agreed criteria and guidelines.
 - (iv) It was suggested that any badger vaccination programme should be focused areas identified as "high risk" or "hot spots" as stated at 6.1(b)(ii) above.
 - (v) It was suggested that a badger vaccination strategy programme could only be administered/delivered with: buy-in from, and in partnership with, all relevant stakeholders (including government, land owners and eNGOs); and the use of trained and licensed lay vaccinators.
 - (vi) One party suggested that the potential significant additional cost of any agreed badger intervention could be funded by the introduction of a public-private Badger Vaccination Fund, as in Wales and England.
- (c) From the perspective of the veterinarian representative organisations, veterinarians and AFBI on the specified items (a) to (f), the views expressed were as follows:
 - (i) Apart from one totally dissenting individual veterinarian, there was qualified support for the vaccination of badgers as an acceptable approach to assist in the eradication of TB in the badger population and cattle, but also with the removal of infected badgers (as in TVR).
 - (ii) Trapping, testing, vaccination of healthy badgers and euthanizing of infected ones were viewed as how best to deliver such a programme.
 - (iii) There was some divergence of views on where a badger vaccination programme should be focused, with two veterinarian organisations suggesting that the focus be on less affected areas and one, along with

AFBI, suggesting that the focus be on areas where TB incidence in both cattle and badgers is high.

- (iv) There was some divergence of views on who should administer/deliver a badger vaccination strategy programme with one veterinarian organisation suggesting the use of local groups overseen by DARD and another the involvement of only PVPs and DARD staff.
- (v) There was support for the potential significant additional cost of any agreed badger intervention being jointly funded by both the industry and DARD.
- (d) From the perspective of the private individuals on the specified items (a) to (f), the views expressed were as follows:
 - (i) On the vaccination of badgers as an acceptable approach to assist in the eradication of TB in the badger population and cattle, two did not see it as a viably acceptable approach, but three supported a programme of vaccination and removal of infected badgers (as in TVR), though all preferred the vaccination of cattle.
 - (ii) Trapping, testing, vaccination of healthy badgers and removal of infected ones were broadly viewed as how best to deliver such a programme.
 - (iii) There were no specific views on where a badger vaccination programme should be focused.
 - (iv) There were no really specific views on who should administer/deliver a badger vaccination strategy programme, though reference was made to the use of trained lay volunteer testers.
 - (v) On funding the potential significant additional cost of any agreed badger intervention, one viewed the use of trained lay volunteer testers as a cost reduction measure.

7. Farm Practice and Biosecurity

- 7.1. In terms of farm practice and biosecurity, it was noted that:
 - (a) From the perspective of the industry on the specified items (a) to (h), the views expressed were as follows:
 - (i) In terms of those biosecurity measures (outlined at sections 8.4 to 8.11of the Consultation Paper) which in order of preference would give the greatest TB control benefit, one party expressed concern that some were impractical, if not unachievable; two other parties did not believe that any changes needed to be made to on-farm biosecurity; and another stated

that good standards are on the whole adhered to by livestock hauliers and farmers.

- (ii) There was no support for the suggested introduction of pre-movement testing (the comment being made that the current test for TB is not robust enough to prevent the sale of infected animals or the spread of TB) or for farmers paying for such.
- (iii) There was some qualified support for farmers being required to notify DARD if moving animals within their farms over a certain distance (especially in the case of restricted herds); but with the proviso that they be given assurance that any such notification would not add to an animal's number of herd movements and so reduce its value. No comment was offered on the suitability of the suggested movement ranges in the absence of having access to more information on typical animal movement data. However, it was suggested that a larger distance (perhaps >25/50 miles) might be used in early initiation of such a proposal before gradually reducing the range.
- (iv) On the matter of information boards at livestock marts displaying the date a herd was last TB restricted and other information that would be beneficial to farmers purchasing livestock, there was qualified support for more such information being made available to better inform farmers' buying decisions. It was suggested, however, that such action(s) may be more appropriate later in the disease control programme, as their imposition at current levels of TB incidence could have a negative impact on the market.
- (v) On the matter of whether animals in total housing finishing units should continue to be TB tested bi-monthly, there was a view that: such bimonthly testing should be removed provided that livestock can only be sold direct to slaughter; and some measures should be put in place to ensure that such cattle are kept indoors at all times (e.g. by means of spot checks).
- (vi) There was no support for the introduction of 'Improvement Notices'. Current on-farm biosecurity was seen to have proven robust enough to prevent animal to animal and herd to herd transmission of brucellosis and so provided further anecdotal evidence of the necessity to address TB in the local wildlife population.
- (vii) On the matter of the leasing of conacre land by farmers on a longer term basis (minimum of 5 years) leading to improved biosecurity and other land management practices, there was a view that this would likely be the case on both accounts, but only if HMRC alter the rules surrounding agricultural tax relief.

- (b) From the perspective of the conservationists and environmentalists on the specified items (a) to (h), the views expressed were as follows:
 - (i) In terms of those biosecurity measures outlined at sections 8.4 to 8.11of the Consultation Paper as stated above, there was wide support for all such biosecurity measures, but in various degrees of order of preference.
 - (ii) There was no specifically expressed support for the suggested introduction of pre-movement testing or for farmers to pay for such. There was wide support, however, for cattle movements to be closely monitored and regulated to minimise transmission of infection.
 - (iii) There was broad support for farmers being required to notify DARD if moving animals within their farms over a certain distance and one party called for the introduction of the option to class rented land over 5 miles from the home farm as a new farm.
 - (iv) On the matter of information boards at livestock marts displaying the date a herd was last TB restricted and other information that would be beneficial to farmers purchasing livestock, there was some support for more such information being made available to better inform farmers.
 - (v) There were no views expressed on the matter of whether animals in total housing finishing units should continue to be TB tested bi-monthly.
 - (vi) There was broad support for the introduction of 'Improvement Notices' and for their stringent enforcement in terms of related sanctions (e.g. withholding compensation, herd restrictions or cross-compliance measures).
 - (vii) There was some support for the leasing of conacre land by farmers on a longer term basis (minimum of 5 years) leading to improved biosecurity and other land management practices.
- (c) From the perspective of the veterinarian representative organisations, veterinarians and AFBI on the specified items (a) to (h), the views expressed were as follows:
 - (i) In terms of those biosecurity measures outlined at sections 8.4 to 8.11of the Consultation Paper as stated above, there was a very broad raft of comments on all of them and various expressed degrees of order of preference. Highlighted themes were the following: many such biosecurity measures make good sense in terms of general animal disease control, but do not always result in the reduced risk, incidence or prevalence of TB; emphasis should be placed on the implementation of accepted basic biosecurity measures; and the focus should be directed at the level of each farm on a case by case basis with the direct involvement of PVPs.

- (ii) There was support for the suggested introduction of pre-movement testing (especially in the case of designated high risk herds) and, additionally, for post-movement testing where conacre might be involved. Some, but not all, thought it reasonable for farmers to pay for such testing.
- (iii) There were mixed views on farmers being required to notify DARD if moving animals within their farms over a certain distance, one party pointing out that other criteria could be more relevant.
- (iv) On the matter of information boards at livestock marts displaying the date a herd was last TB restricted and other information that would be beneficial to farmers purchasing livestock, there was support for the display of such information (along with a possible grading system), but taking proper account of data protection issues.
- (v) There was no real support for animals in total housing finishing units continuing to be TB tested bi-monthly.
- (vi) There was qualified support for the introduction of 'Improvement Notices', but with an emphasis on the use of encouragement rather than strict enforcement by means of sanctions, except in extreme cases.
- (vii) There was some, but not unifrorm, support for the leasing of conacre land by farmers on a longer term basis (minimum of 5 years) leading to improved biosecurity and other land management practices.
- (d) From the perspective of the private individuals on the specified items (a) to (h), the views expressed were as follows:
 - (i) In terms of those biosecurity measures outlined at sections 8.4 to 8.11of the Consultation Paper as stated above, two supported implementation of all such biosecurity measures and one suggested in order of preference the implementation of 8.8 (informed purchasing), 8.4 (use of double fencing, etc.) and 8.5 (protecting feed stores from wildlife).
 - (ii) Three expressed support for the suggested introduction of pre-movement testing, whilst two were against it. None commented on farmers having to pay for such testing.
 - (iii) Three were in support of farmers being required to notify DARD if moving animals within their farms over a certain distance (with one expressing a preference for the lesser distance of 3 miles).
 - (iv) On the matter of information boards at livestock marts displaying the date a herd was last TB restricted and other information that would be beneficial to farmers purchasing livestock, there were two in support of such information being made available to better inform farmers.

- (v) There were no views expressed on the matter of whether animals in total housing finishing units should continue to be TB tested bi-monthly.
- (vi) There were three in support of the introduction of 'Improvement Notices'.
- (vii) There were no views expressed on the leasing of conacre land by farmers on a longer term basis.

8. Research and Policy Development

- 8.1. In terms of suggested areas for research and approaches to take them forward, it was noted that:
 - (a) From the perspective of the industry, the views expressed were as follows:
 - (i) A more strategic approach to research is required aimed at protecting the entire Northern Ireland herd.
 - (ii) Research should primarily focus on improved diagnostics (specifically improving test sensitivity and specificity) and other priorities should include: concurrent infections; cattle genomics; TB prevalence/strains in other wildlife species (deer/hedgehogs/pine martens/cats/squirrels, etc); and vaccination.
 - (iii) On the basis that wildlife contributes to the spread of the disease, ongoing research must be pursued with great urgency and the active involvement of the farming community is essential to the success of such research.
 - (iv) Such research should also draw on evidence from Northern Ireland as well as evidence from the Republic of Ireland whose jurisdiction faces the same unique challenges as ours.
 - (v) Any debate on whether or not badgers should continue to be a protected species should be informed by up-to-date relevant research.
 - (b) From the perspective of the conservationists and environmentalists, the views expressed were as follows:
 - (i) Knowledge obtained from robust research is crucial to an effective evidence-led strategy and should be treated as a priority area for resources and funding.
 - (ii) Since there is nothing in the most reliable contemporary evidence to directly implicate badgers as a cause of herd breakdowns, further research priorities should be directed at identifying and developing effective herd-based regimens and strategies.

- (iii) Much more research is required in the area of discovering and mitigating factors driving cattle to cattle transmission and TB persistence within some herds.
- (c) From the perspective of the veterinarian representative organisations, veterinarians and AFBI, the views expressed were as follows:
 - (i) There is justification for research on the role of infection with a concurrent immuno-suppressive disease and the outbreak of TB in a herd or area.
 - (ii) Given the known and well documented synergy that occurs between *Mycobacterium tuberculosis* (*M. tuberculosis*) and Human Immunodeficiency Virus (HIV) in human TB, it seems obvious that the possible interaction of Bovine Immunodeficiency Virus (BIV) and *Mycobacterium bovis* (*M. Bovis*) in bovine TB should be investigated.
 - (iii) The diagnostic tools available for both cattle and badger populations still need refining, since testing badger populations poses particular problems when it is not possible to test the whole population as with cattle. The ability to recognise which badger social groups represent an epidemiological threat would greatly enhance control.
 - (iv) Modelling is a very useful tool if used appropriately (provided care is taken to ensure that any assumptions driving the model are correct) and if it could be used, for example, to indicate whether there is an optimal badger population density that could be used to guide badger control programmes.
 - (v) The issues of latency and undisclosed carriers in cattle are still of great concern as a driver of ongoing infections in problem herds.
 - (vi) Without proof that particular biosecurity measures will significantly reduce infection, it is difficult to show their cost benefit(s) which is essential if farmers are to: spend money on such biosecurity measures; or incur a reduction in compensation on the basis of any identified non-compliance.
 - (vii) Since vaccination of badgers has yet to be shown to reduce the incidence of TB in cattle, research is essential to establish its cost effectiveness or not.
 - (viii) Since currently the effectiveness of delivering oral bait vaccine is likely inadequate to provide the whole answer to the control of TB in badgers, mathematical modelling could perhaps point the way to a successful programme of population control combined with vaccination.
 - (ix) Pleasure was expressed that the results of the DARD-funded research project evaluating gamma interferon testing in TB eradication should soon

become available and there was support for its introduction and use in the current eradication programme.

- (x) Strain typing seems to be a very interesting area of research as it would potentially enable practising veterinary surgeons to elucidate patterns of disease spread which currently remain poorly understood. With their wealth of experience and local knowledge they are in a position to have a significant input into the epidemiological investigation of TB outbreaks.
- (xi) Research in the areas of epidemiology and mathematical modelling has immediate appeal, given that it: involves analysis of data already collected as part of the TB eradication scheme; is potentially relatively inexpensive and cost-effective; and comprises data collected here.
- (xii) Research into the use of enhanced antigens to increase the specificity/sensitivity of existing diagnostic tests could perhaps prove very costly in terms of time and money and ultimately draw a blank.
- (xiii) Subject to potential EU approval, research into vaccination was thought to be an area that might produce results and rapidly prove to have significant practical applications. Whilst any research project involving the evaluation of a vaccine in large numbers of animals would inevitably be a costly exercise, the introduction of vaccination was seen as a game-changing step to breathe new life into the TB eradication scheme.
- (xiv) Genetic research is likely to prove extensive, prolonged and costly and is perhaps best entered into jointly with a centre of excellence elsewhere rather than as a home-grown exercise.
- (xv) Research into latency of TB in the field is complicated by the nature of the SICTT (which only detects infections that have become established at least two months previously), but could be looked into more closely if the gamma interferon test was to come into general use.
- (xvi) The role of immune suppression due to concurrent infections as a complicating factor in the diagnosis of TB in the field is an area of research worthy of closer attention.
- (xvii) It was highlighted that part of the rationale for the TB eradication scheme and for future research into TB in cattle is the safeguarding of human health, as well as the protection of animal health and the meat export industry.
- (xviii) Research into the best use of current diagnostics, development of new diagnostics, and further development and deployment of vaccines for the control of TB in both cattle and badgers is of the utmost importance.

- (xix) Investigations into alternative sett-based humane culling methods, nonlethal methods of population control (contraceptives), Polymerase Chain Reaction (PCR) technology, sett-side diagnostics and research into selection of cattle for genetic resistance to TB.
- (xx) Further research is required on the widened application and development of TB molecular strain typing techniques (including whole genome sequencing) and enhanced analysis of the data to increase the effectiveness of epidemiological investigations at regional and local levels.
- (xxi) A project is needed to optimise the IFNG test for local conditions and to reduce its cost here.
- (xxii) The opportunity presented by ongoing TVR field trials on badger vaccination should be maximised by collecting and analysing data on cattle and badger dynamics, basic badger ecology and molecular epidemiology.
- (xxiii) Further research is required on cattle genomics in collaboration with industry, e.g. recent UK and Ireland collaborative research involving AFBI and industry and research partners has indicated that there is exploitable genetic variation in the susceptibility of cattle to TB.
- (xxiv) Further research is required to establish the dynamics of TB infection in cattle, including the potential effects of latency and circumstances of resuscitation of the organism in individual animals.
- (xxv) Further epidemiological investigations here into the association of liver fluke, paratuberculosis (Johne's disease) and bovine virus diarrhoea virus infection with bovine TB are considered worthy of support, as also is further work to determine the potential of serological and other testing approaches to contribute to TB eradication.
- (xxvi) The need for further socio-economic research is suggested to ensure that eradication is achieved here in the shortest time possible so as to protect our trading interests.
- (d) From the perspective of the private individuals, the views expressed were as follows:
 - (i) One stated that all the suggested research areas should be supported.
 - (ii) Another favoured TB Strain Typing and Concurrent Infections.

9. Funding TB Eradication

9.1. In terms of funding TB Eradication, it was noted that:

- (a) From the perspective of the industry on the specified items (a) to (g), the views expressed were as follows:
 - (i) When the full and proper costs of re-testing (with all its implications in terms of loss of production and restrictions, etc.) are taken into account, 100% compensation is not truly 100% since going down with TB and handling the related stress is always going to be a disaster.
 - (ii) Extreme opposition to any reduction in the compensation levels paid to farmers was expressed on the grounds that, whilst compensation is paid at 100% of an animal's value, that still does not cover: the cost of rearing additional calves; the loss of earnings due to test impact on livestock feeding; the cost of additional labour and time to complete the tests; the time taken to look after additional livestock; the reduction in milk yield in the days following a TB test; and the negative impact on animal fertility, abortions, or accidental injury to livestock during testing.
 - (iii) Since farmers as producers bear significant burdens (in terms of time and resources as well as the entire burden of consequential loss and the related stress of witnessing the destruction of many animals), no justification for changing the present funding arrangements can be countenanced until there is a robust programme in place here which has the reasonable possibility of eradicating TB.
 - (iv) The present time is not viewed as right for any major changes which could threaten family farm businesses that are already close to bankruptcy. One suggested option for further investigation, however, is the French system based on replacement and re-stocking costs.
 - (v) Marts here do not currently collect any levies and do not wish to. Moreover, the many existing pressures on farmers' finances indicate that the way forward for any new programme is to work within existing government budgets.
 - (vi) The linking of compensation to biosecurity was viewed as involving an unobtainable standard owing to allied excessive and unworkable demands.
 - (vii) There was also no support for the linking of compensation to biosecurity for the reason stated at 7.1(a)(vi) above, though it was suggested that a heavier weighting in the farm modernisation grant could be added to projects that improve on-farm biosecurity.
 - (viii) All stakeholders should pay a sensible proportion if they are to have a say in this matter and the multiple ways in which farmers pay should also be taken into account.

- (ix) As previously stated at 6.1(a)(vi) above, if DARD can demonstrate that they are willing to make a robust effort to control TB in the wildlife, the industry may then be willing to discuss helping to shoulder more of the financial burden. The most suitable method for doing this may be by farmers paying for one annual herd test provided that the money is ringfenced and invested in addressing the removal of infected wildlife from hot spot areas.
- (x) In terms of an alternative funding model, farmers should only have to contribute to such if they have proper input to the overall programme. Further, since controlling TB in wildlife by vaccination is likely to be an expensive process, such vaccination should be paid for by the groups that are calling for its implementation (e.g. environmentalist groups).
- (xi) In terms of agreement to financial penalties being linked to repeated test avoidance, there were opposing views. One party were in agreement where it was proven, but called for busy seasonal periods and ill health factors to be taken into consideration and for a reasonable degree of flexibility to be given. Another party did not agree since farmers are already fined for test avoidance by means of TB cross-compliance.
- (b) From the perspective of the conservationists and environmentalists on the specified items (a) to (g), the views expressed were as follows:
 - (i) Compensation should remain at 100% as an incentive to farmers to support TB measures but be tied to compliance with on-farm biosecurity measures - timely testing, best practice and infection control. Failure to meet test obligations, adhere to best practice or implement adequate measures to mitigate risk should incur penalties, either as reduced compensation payments or fines.
 - (ii) In terms of compensation, a more robust penalty-based regime with stiffer fines for failing to comply with legally constituted regulations may improve the current situation.
 - (iii) There needs to be some contribution at both producer and processor level, so that everyone 'buys in' to an improved system since if there is no financial commitment then it is unlikely that any new system will be any better than the existing one.
- (c) From the perspective of the veterinarian representative organisations and veterinarians on the specified items (a) to (g), the views expressed were as follows:
 - (i) Since there are a number of consequential losses that arise from TB infection in a herd, even with compensation at 100% for removed animals, farmers still suffer economic loss. Under-compensating for reactors also

provides a perverse incentive for non-disclosure and indulgence in sharp practices which can contribute to further disease spread.

- (ii) As there is no evidence that particular biosecurity measures work, a cost benefit for any such measures cannot therefore be demonstrated and so enforcing them by penalising farmers that do not apply them is inappropriate.
- (iii) It was otherwise stated that farmers as producers should be paid the full market value of reactor animals, but for deductions to be made for failure to implement improvements in biosecurity within a reasonable timescale. Alternatively, the standard payment could be pegged at less than full market value, but with farmers being able to earn higher levels of compensation by taking steps to improve biosecurity on their holding. What was viewed as most important was establishing a link between improvements in biosecurity and higher levels of compensation.
- (iv) There was also support for the principle of a reduction in compensation where there is lack of compliance by farmers with statutory bio-security guidance (or, in time, with best practice on evidence-based biosecurity). Given a demonstrable link to the risk of disease spread, there was support too for the use of compensation to reward risk reduction and to penalise risky practices. However, where in some circumstances failure to comply with bio-security measures may be unavoidable, an appeals process should be put in place.
- (v) The state was seen to have to bear its share of responsibility for the control of TB since it is a zoonotic disease (one that can be transmitted from animals to humans). Whilst the best way to reduce the funding needed is to reduce the incidence of the disease itself, an independent board in charge of the disease control programme (and involving the farming industry with the freedom to use all available measures) would be able to look at funding options.
- (vi) In the current climate of fiscal austerity, the industry should make a contribution towards the cost of TB eradication. A system of beef and milk levies akin to that already operating in the Republic of Ireland is not without merit.
- (vii) Farmers should meet their responsibility to take measures to prevent the spread of infection and be prepared to share some of the industry costs for TB control and eradication. However, without the application of improved TB control measures for wildlife (in particular for badgers), the imposition of additional financial costs on farmers may prove counterproductive to their acceptance of such cost-sharing.

- (viii) The funding of TB Eradication should be shared among farmers, industry and government, with agreement being reached on the proper balance between industry cost and government assistance. Funding for animal testing, epidemiological investigation, animal compensation and wildlife intervention should be agreed separately.
- (ix) There was a suspicion that the desire of the current Westminster administration to slash public spending here has more to do with the need for an alternative funding model for a new TB eradication programme than any other factor.
- (x) Requiring farmers to pay for an annual herd test should be an issue for a new independent control board to determine. If it occurred as a part of a more open and engaged strategy leading to a better chance of controlling the disease, it would be acceptable to farmers.
- (xi) Requiring farmers to pay for TB tests would be a retrograde step where the cost of a test becomes a matter for negotiation between the farmer and his vet. The likely result would be downward pressure on fees with neighbouring veterinary practices competing for TB testing work in what will turn into a race to the bottom. Any fall in income generated by TB testing is also likely to lead to pressure to carry out work more quickly and inevitably cut corners.
- (xii) A decision on paying for an annual TB herd test, which may increase the sense of ownership of the TB strategy, is something that a future Northern Ireland industry-government board may wish to consider.
- (xiii) Repeated test avoidance or non-compliance with the TB control programme should be penalised, but not where non-compliance was the result of either personal circumstances or third party issues.
- (xiv) It is important that all herd tests are completed within the time window allowed if the TB Eradication Programme here is to pass muster with the EU veterinary authorities. In this context there is no objection to the imposition of financial penalties on recidivist test avoiders, although any extenuating circumstances might need to be taken into consideration.
- (d) From the perspective of the private individuals on the specified items (a) to (g), the views expressed were as follows:
 - (i) One stated that, as it was the failure of the Veterinary Service to control TB in wildlife that caused the costs of the TB Eradication Programme to escalate, farmers should not be held to ransom in terms of making a financial contribution to such costs.

- (ii) Another stated that compensation of 100% should continue to be paid to farmers as an incentive for them to carry on supporting those measures required to combat TB.
- (iii) Another finally expressed support for the specified items (a), (c), (d), (e) and (g), but not for (f).

APPENDIX

LIST OF RESPONDENTS TO THE PUBLIC CONSULTATION ON THE TBSPG INTERIM REPORT BY SECTOR

Farming Industry's Representative Bodies (in alphabetical order)

Belfast Hills Partnership (Dr Jim Bradley, Partnership Manager)

Holstein Society (Brian F. Walker, Senior Partner, Walker McDonald Solicitors)

National Beef Association (Oisín Murnion)

Northern Ireland Livestock Auctioneers Association (James Johnston)

Ulster Farmers' Union (Ian Marshall, President)

Young Farmers' Clubs of Ulster (Heather Stewart, Programmes Assistant Manager)

Conservationists and Environmentalists (in alphabetical order)

Lecale Conservation (Doris Noe, Chair)

Mike Rendle

National Trust - Northern Ireland (Victoria Magreehan, External Affairs Consultant)

Northern Ireland Badger Group (Peter Clarke, Coordinator)

Northern Ireland Environment Link (Dr Stephen McCabe, Senior Policy Officer)

Organic NI (David Laughlin, Group Secretary)

Veterinarian Representative Organisations, other Veterinarians and AFBI (in alphabetical order)

AFBI (Professor Seamus Kennedy, Chief Executive)

Alan Clements MVB, MSc, MRCVS

Andrew Doyle, DARD Veterinary Officer

Association of Veterinary Surgeons Practising in Northern Ireland (Jo Gibson

Secretary General, VetNI)

British Cattle Veterinary Association (Dee Little, Association Administrator)

British Veterinary Association - Northern Ireland Branch (Hannah Jordan, Interim Policy Officer)

DARD Patch Veterinary Officer

DJB Denny BVetMed, MRCVS

M S McNulty MVB, PhD, MRCVS (Former DARD Chief Veterinary Research Officer and Professor of Veterinary Science, QUB)

Private Individuals (in alphabetical order by forename)

David P Barr

David Wallace

Freda Cave

Glenn Newell

Jennifer Cave

Kevin MacAuley

Martin Hancox