



**Cynulliad Cenedlaethol Cymru  
The National Assembly for Wales**

**Yr Is-bwyllgor Datblygu Gwledig  
The Rural Development Sub-committee**

**Dydd Mercher, 25 Gorffennaf 2007  
Wednesday, 25 July 2007**

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Evidence to the Committee for its Inquiry into Bovine TB in Wales: Country Land and Business Association Wales

Cofnodir y trafodion hyn yn yr iaith y llefarwyd hwy ynndi yn y pwyllgor. Yn ogystal, cynhwysir cyfieithiad Saesneg o gyfraniadau yn y Gymraeg.

These proceedings are reported in the language in which they were spoken in the committee.  
In addition, an English translation of Welsh speeches is included.

**Aelodau'r pwyllgor yn bresennol**  
**Committee members in attendance**

Alun Davies	Llafur (Cadeirydd) Labour (Chair)
Mick Bates	Democratiaid Rhyddfrydol Cymru Welsh Liberal Democrats
Brynle Williams	Ceidwadwyr Cymreig Welsh Conservatives

**Eraill yn bresennol**  
**Others in attendance**

Dai Davies	Llywydd, Undeb Cenedlaethol yr Amaethwyr Cymru President, National Farmers' Union Cymru
Dr Nick Fenwick	Cyfarwyddwr Polisi Amaethyddol, Undeb Amaethwyr Cymru Director of Agricultural Policy, Farmers' Union Wales
Mary James	Dirprwy Gyfarwyddwr a Phennaeth Polisi, Undeb Cenedlaethol yr Amaethwyr Cymru Deputy Director and Head of Policy, National Farmers' Union Cymru
Steve James	Cynrychiolydd Undeb Cenedlaethol yr Amaethwyr Cymru ar y Grŵp Gweithredu ar TB National Farmers' Union Cymru representative on the TB Action Group
Rhydian Rees	Cadeirydd Is-bwyllgor Materion Gwledig, Clwb Ffermwyr Ifanc Rural Affairs Committee Chairman, Young Farmers' Club
Paddy Rooney	Cynrychiolydd Pwyllgor Gweithredol y Gymdeithas Tir a Busnes Cefn Gwlad yng Nghymru ar y Grŵp Gweithredu TB Country Land and Business Association Welsh Executive Committee representative on the TB Action Group
Julian Salmon	Cyfarwyddwr Rhanbarthol, Cymdeithas Tir a Busnes Cefn Gwlad Cymru Regional Director, Country Land and Business Association Wales
Brian Walters	Is-lywydd, Undeb Amaethwyr Cymru Vice President, Farmers' Union Wales

**Swyddogion Gwasanaeth Seneddol y Cynulliad yn bresennol**  
**Assembly Parliamentary Service officials in attendance**

Daniel Collier	Dirprwy Glerc Deputy Clerk
Dr Kathryn Jenkins	Clerc Clerk

*Cynhaliwyd y cyfarfod yn Sioe Amaethyddol Frenhinol Cymru.*  
*The meeting was held at the Royal Welsh Show.*

*Dechreuodd y cyfarfod am 10.00 a.m.*  
*The meeting began at 10.00 a.m.*

## **Cyflwyniad, Ymddiheuriadau, Dirprwyon a Datgan Buddiannau Introduction, Apologies, Substitutions and Declarations of Interest**

[1] **Alun Davies:** Yr wyf yn galw'r cyfarfod i drefn a'i ddechrau drwy wneud cyhoeddiad am aelodaeth y pwyllgor hwn. Bu Elin Jones yn eistedd ar y pwyllgor ond, oherwydd iddi ymuno â'r Llywodraeth, mae wedi gadael y pwyllgor. Yr wyf yn deall y bydd Alun Ffred yn cymryd ei lle dros yr haf, ond mae'n methu â bod gyda ni heddiw. Bydd Alun Ffred yn cynrychioli Plaid Cymru ar y pwyllgor hwn dros y misoedd nesaf, nes y ceir datganiad ffurfiol ar aelodaeth y pwyllgorau i gyd yn sgîl sefydlu'r Llywodraeth newydd.

**Alun Davies:** I call the meeting to order, and begin by making an announcement about the membership of this committee. Elin Jones sat on this committee but, as she has joined the Government, she will not be a member of the committee. I understand that Alun Ffred will replace her over the summer, but he is unable to be with us today. Alun Ffred will represent Plaid Cymru on this committee over the coming months until a formal announcement is made on the membership of all committees in the wake of the establishment of the new Government.

[2] Yr wyf hefyd am wneud datganiad ar swyddogaeth y pwyllgor hwn. Ers yr etholiad ym mis Mai, mae ffurf pwyllgorau'r Cynulliad wedi newid. Gyda'r grymoedd newydd sydd wedi dod i Gaerdydd, dan Ddeddf Llywodraeth Cymru 2006, a basiwyd gan y Senedd, bydd y pwyllgor hwn yn craffu ar waith y Llywodraeth. Nid oes lle i Weinidogion eistedd ar y pwyllgorau hyn bellach, sy'n golygu eu bod yn dra gwahanol i'r pwyllgorau a oedd yn arfer bodoli yn y Cynulliad hyd at fis Mai. Felly, mae swyddogaeth y pwyllgor hwn yn wahanol, a bydd yn gweithredu mewn ffordd tra gwahanol i'r hyn a welwyd yn yr ail Gynulliad.

I will also make a statement on the role of this committee. Since the election in May, the nature of Assembly committees has changed. With the new powers that have come to Cardiff, under the Government of Wales Act 2006, which was passed by Parliament, this committee will scrutinise the work of Government. Ministers will no longer sit on these committees, which means that they differ greatly from the Assembly committees that existed before May. Therefore, the role of the committee is different, and the way in which it will work will differ greatly to what was seen in the second Assembly.

[3] Dechreuaf drwy drafod sut y bydd yr ymchwiliad hwn yn rhedeg dros y misoedd nesaf. Fel pwyllgor, yr ydym wedi trafod y blaenoriaethau sy'n wynebu'r diwydiant amaeth a chefn gwlad, a phenderfynu mai twbercwlosis mewn gwartheg yw un o'r heriau mwyaf i wynebu cefn gwlad ar hyn o bryd. Yr ydym wedi blaenoriaethu hyn ar gyfer archwiliad cyntaf y pwyllgor hwn a phenderfynu cynnal cyfarfodydd yn ystod toriad yr haf er mwyn sicrhau y gallwn adrodd i'r Cynulliad a'r Llywodraeth yn ystod tymor yr hydref.

I will begin by looking at how this inquiry will run over the months to come. As a committee, we have discussed the priorities that face the agricultural industry and rural areas, and we have decided that bovine tuberculosis is one of the greatest challenges facing rural Wales at present. We have prioritised this as the subject of the committee's first inquiry, and we have decided to hold meetings during the summer recess in order to ensure that we can report to the Assembly and to the Government during the autumn term.

[4] Dyma gyfarfod cyntaf yr archwiliad hwn, ac yr wyf yn falch bod Undeb Amaethwyr Cymru, Undeb Cenedlaethol yr Amaethwyr Cymru a Chymdeithas Tir a Busnes Cefn Gwlad wedi gallu dod i

This is the first meeting of this inquiry, and I am pleased that the Farmers' Union of Wales, National Farmers' Union Wales and the Country Land and Business Association have all been able to produce evidence so swiftly. I

gyflwyno tystiolaeth mor fuan. Yr wyf yn diolch ichi am hynny. Hoffwn ddweud ar y dechrau y byddwn yn cwrdd yn ystod misoedd Medi a Hydref, a bydd cyfle ichi ddod yn ôl at y pwyllgor, gyda thystiolaeth ar lafar neu yn ysgrifenedig, os oes rhywbeth yn codi yn y misoedd nesaf yr ydych am ymateb iddo, neu os byddwn am ofyn ichi am fwy o wybodaeth.

thank you for that. I would also like to say, at the outset, that we will be meeting during September and October, and that there will be an opportunity for you to return to the committee, with oral or written evidence, if anything arises over the coming months to which you would like to respond, or if we wish to ask you for further information.

[5] Cyn i ni symud ymlaen at y gwaith, dylem nodi fod hon yn foment hanesyddol. Dyma'r tro cyntaf i'r Cynulliad gynnal cyfarfod pwyllgor ffurfiol ar faes Sioe Amaethyddol Frenhinol Cymru. Hefyd, blwyddyn yn ôl i heddiw y derbyniodd Deddf Llywodraeth Cymru 2006 Gydsyniad Brenhinol. Felly, mae blwyddyn union ers inni dderbyn y grymoedd newydd.

Before we go on to our work, we should note that this is an historic moment. This is the first time that the Assembly has held a formal committee meeting on the Royal Welsh Show ground. Also, it is exactly a year since the Government of Wales Act 2006 received Royal Assent. Therefore, it is a year to the day since we received the new powers.

[6] Gyda'r geiriau hynny, yr wyf yn gofyn ichi ddiffodd eich ffonau, nid eu hateb ond eu diffodd—mae digon o le tu allan os ydych am gynnal sgwrs. Byddwn yn dechrau gyda'r NFU. Fel y dywedais, byddwn yn derbyn tystiolaeth ym mis Medi mewn cyfarfod yng Nghaerfyrddin. Byddwn yn cynnal cyfarfod gyda'r Gweinidog newydd a'r Prif Swyddog Milfeddygol. Yr ydym hefyd yn mynd i Iwerddon yn ystod mis Hydref. Fel pwyllgor, yr ydym yn disgwyl gallu cyhoeddi ein hadroddiad ddechrau mis Tachwedd.

Having said that, I ask you to switch off your mobile phones, not to answer them, but to switch them off completely—there is plenty of room outside if you want to have a chat. We will start with the NFU. As I said, we will take evidence in September at a meeting in Carmarthen. We will meet with the new Minister and the Chief Veterinary Officer. We will also be going to Ireland during October. As a committee, we expect to be able to publish our report at the beginning of November.

10:05 a.m.

**Cyflwyno Tystiolaeth i'r Pwyllgor ar gyfer ei Ymchwiliad i TB mewn Gwartheg yng Nghymru: Undeb Cenedlaethol yr Amaethwyr Cymru**  
**Evidence to the Committee for its Inquiry into Bovine TB in Wales: National Farmers' Union Cymru**

[7] **Alun Davies:** Gofynnaf i'r ddau dyst gyflwyno eu hunain a'u timau a chyfeirio at y dystiolaeth sydd ganddynt.

**Alun Davies:** I ask the two witnesses to introduce themselves and their teams and refer to their evidence.

[8] **Mr Davies:** Diolch yn fawr, Gadeirydd.

**Mr Davies:** Thank you, Chair.

[9] I thank the sub-committee for the opportunity to be here today to present our oral evidence. We are also very grateful for the fact that you have already accepted our written evidence. I am Dai Davies, the president of NFU Cymru. I am a dairy farmer from Whitland in Carmarthenshire whose herd was first infected some four years ago. Since then, we have had a three-year period of cleanliness within the herd, but, unfortunately, last spring, we found ourselves back in the same situation of the herd being infected with TB again. I am a

former member of the TB forum in London and the TB action group—it seems to me that most of my life is in the past, but we will plough on into the future. I am delighted that I have been able to persuade my two colleagues to accompany me, namely Mrs Mary James, the head of policy and deputy director at NFU Cymru, and Mr Steve James, a dairy farmer from Clunderwen in Pembrokeshire who represents the NFU on the TB action group—his herd has been infected, off and on, for the last 12 years.

[10] Like yourselves, NFU Cymru has had a pretty hectic time in terms of the agenda at the Royal Welsh Show, but that agenda is very much secondary to the importance of being here this morning. As requested by the sub-committee, in its terms of reference, we have submitted written evidence, which is based on two aspects, namely the Independent Scientific Group on Cattle TB's report and the implementation of the Environment, Planning and Countryside Committee's recommendations in its report of 2004. The sub-committee has our report, and we have summarised our conclusions and recommendations on page 1. I want to emphasise that the ISG report should be viewed in conjunction with all the other scientific evidence that is now available. I want to draw your attention in particular to the ISG's findings on page 90, where it states that there was no evidence of perturbation or any increase in the *Mycobacterium bovis* infection in badgers where coastlines, major rivers or motorways formed a substantial portion of the trial boundaries, and, therefore, geographical boundaries to badger movements might also be expected to influence the impact of badger culling on cattle. Thorough and regular culling within a relatively large area with hard geographical boundaries has the potential to reduce the incidence of TB in cattle and badgers. We should put this scientific knowledge to the test in Wales as soon as possible. I emphasise that point, because the ISG's cost-benefit analysis does not consider this scenario.

[11] As an organisation, we feel very strongly that the persistent ratcheting up of measures on cattle and the economic implications in that regard will decimate the cattle industry in Wales, and the notion of zoning the country for the purpose of moving cattle will inevitably result in a two-tier market system. This is very relevant in Wales, if you consider the historical stock production that we have enjoyed in Wales whereby we rear our cattle and then many of them are taken over the border to England. If we have a zoning system in place, we will not be able to carry out our normal practices.

[12] In terms of the implementation of the EPC committee's recommendations, we are bitterly disappointed at the failure, three years on, to adopt a holistic approach to the eradication of TB, as was recommended by the committee. The failure is reflected in the onward march of the disease. It was anticipated that the result of the badger-found-dead survey would inform decisions on wildlife intervention, but this has not happened. Also, the ISG report findings indicate that the level of infectivity in badgers is likely to be grossly underestimated.

10.10 a.m.

[13] Finally, I would like to make the point that cattle movements are always alleged to be responsible for the widespread nature of the disease. Scientific evidence from the Veterinary Laboratories Agency on spoligotypes and the results of pre-movement tests convincingly show that this is not the case. I remind the committee that 95 per cent of the incidents occur within hot spots. We feel strongly that, whatever strategy the Minister will wish to adopt, what is paramount is that the budget is in place to facilitate that policy. Short-term pain would deliver long-term gain.

[14] Diolch yn fawr. We welcome your questions.

[15] **Alun Davies:** Thank you, Dai. I appreciate your contribution and the way in which you have put together evidence very quickly in line with the time available to start this

inquiry. I have read your evidence. Do you think that there are any strengths to the ISG report? You mention its weaknesses a great deal, but I have not seen anything to say that there is much in the way of strengths to it, and whether you agree with the ISG results.

[16] **Mr Davies:** The ISG report is very light on conclusions. However, there are certain strong points within it, which we need to pull out. As I said at the beginning of the evidence, we need to balance those with other existing scientific evidence and put them all together to try to form a strategy going forward. I do not know whether my colleagues want to come in on this.

[17] **Ms James:** Yes, I wish to come in, Chairman. On page 90 of the report, to which Dai referred, it shows quite conclusively that, provided that you have hard boundaries, you could institute an effective culling policy and reduce the incidence of disease. So, that is very positive evidence that we should take forward. What the ISG report also shows is how not to do things. It has certainly shown that perturbation is a problem and it has shown that unless you have a significant area with firm boundaries you are going to spread the disease. Actually, that is something that we knew previously, but the report has reaffirmed those previous scientific conclusions. So, I think that it tells as much in terms of how not to do things and how not to approach the problem, as it does in showing what to do.

[18] **Alun Davies:** In terms of the ISG report itself, the only conclusion that you would support and welcome is the conclusion that refers to physical boundaries.

[19] **Mr Davies:** Yes, and the fact that it clearly states that there is a correlation between TB in badgers and TB in cattle. Certain restrictions were imposed upon the Krebs trial from the outset. One restriction was that they could not entertain the total eradication of badgers from clean areas and another was the fact that they were limiting the trial to cage trapping. If you look at evidence from other parts of the world, for example at snaring and shooting in Ireland, in order to reduce the level of perturbation, the Assembly would have to consider going down the route of gassing at some stage. Further evidence that was presented to DEFRA post the Bourne meetings, especially from a group of 33 veterinarians, stressed that the only practical route that should ever be considered to prevent perturbation was the gassing route. We know that, at the moment, there are gassing trials going on in parts of England. As far as gassing was concerned, the biggest problem at one time was that the gas used was lighter than air and that it was difficult to get the gas to infiltrate the setts. However, current trials are mixing that with argon gas, which is heavier than air and tends to do a better job within setts.

[20] **Brynle Williams:** The report says that farmers should take ownership of the problem. Can we now have your views on how you interpret this?

[21] **Mr James:** With respect, as Dai said earlier, I have been in this situation for the last 12 years. We have taken ownership of this problem. It is a disease problem, and, as far as the day-to-day running of a commercial dairy farm such as ours is concerned, it has created havoc. At the moment, we have a testing situation that gets on top of the disease; we all know how inaccurate the testing of the situation is. Ours is a closed herd, and I actually live inside the biosecurity intensive-treatment area. That is one of the only things to have been achieved—in terms of the three areas that were originally talked about with the TB action group, the only one that has been set up so far is the biosecurity ITA. I live inside that area, and biosecurity has been a vital part of the way in which we have run the farm for the last 12 years, because we do not want the disease on the farm and we will do as much as we can to take it off the farm. So that is where we have taken ownership of the disease. Testing is a big day for us. However, if it gets rid of the disease, then we welcome having that test on a regular basis; certainly annually. I am happy to have an annual test. We have tested four times since last September. So, that is the ownership that we have taken of the situation.

[22] **Alun Davies:** So, you would support annual testing?

[23] **Mr James:** Absolutely. I have it anyway.

[24] **Mr Davies:** I would like to give a little evidence on that. Our organisation supports annual testing, but it has to go hand in hand with tag inspection and welfare inspection on the same visit. Every passport would have to be stamped to state when the animal was tested. At a later date, I would expect the Welsh Assembly Government to shoulder the responsibility of looking into pre-movement testing and a cost-benefit analysis of that. The independent scientific group's report was quick enough to state that, given the cost-benefit analysis as far as culling badgers was concerned, it could not entertain it. You expect the industry to shoulder the responsibility of pre-movement testing, so you have to look into the cost-effectiveness of that. With annual testing, there would be a huge question mark over the cost-effectiveness.

[25] **Ms James:** We find it astounding that the ISG can conclude that the industry has not taken ownership of this disease problem. Prior to the publication of this report, in 2006, various stakeholders in the industry came up with a shared strategy for dealing with this disease. I do not know how the ISG can turn around now and say that we are not committed to it or involved in it. Therein lies the problem, I think.

[26] **Brynle Williams:** It is not for me to agree or disagree, but in this case I agree with you entirely. We have taken ownership.

[27] On the testing, we are looking at all methods of testing, not just the skin test, but gamma interferon testing. What are your views on this and which way do we go with this? I think that we have to use the whole battery, and it has to run side by side with an eradication scheme.

[28] **Mr Davies:** In an ideal world, gamma interferon testing would play a major part, especially in picking up the disease at the earlier stage. However, I cannot entertain using gamma interferon testing and taking vast numbers of cattle out of the Welsh national dairy population without looking at the reservoir in wildlife. That would be a total waste of time, and we would be back to square one the day that the last cow goes down the road.

[29] **Mick Bates:** Thank you for your evidence. I would like to look at the design of the trial and your views about the strengths and weaknesses of the design of the trials on the culling methods.

[30] **Ms James:** I will start on that, if I may. The proportion of badgers trapped was extremely low. We were looking at between 20 per cent and 70 per cent. So there certainly was not an efficient cull in terms of the trial. Only after four years did the benefits start to become apparent, but the trial was suspended then. There were very low capture rates. I think that, on average, it was eight days per annum in terms of capture. So it was inevitable that there would be not be an effective and significant reduction in the number of badgers. Also, badgers became trapping-shy, if I can put it that way. They began to realise that they needed to avoid the traps, so not all of the badgers were being caught. Fifty-seven per cent of the traps were interfered with, and 4 per cent were removed. We also had a closed season, despite the fact that Professor Dunnet had shown some years ago that, unless you had an effective cull throughout the year, you would not get the desired outcome.

10.20 a.m.

[31] I think that the other issue was the diagnostic trials themselves, which certainly show



that there was underreporting of infectivity in the badger population.

[32] **Mick Bates:** Let us look at some figures on the proportion of badgers caught that were infected. It seems to me that, from the report, there is a wide range of figures. Where did trapping work well? Where did you see in the ISG report that trapping actually worked well? There are figures of, I think, 60 per cent of badgers caught in certain areas being infected.

[33] **Mr Davies:** There is a huge question mark over the figures. I do not know whether you have had the opportunity of looking at the report that was sent to DEFRA by 33 veterinarians from various parts of England—it states clearly that, over the seven-year culling period, 8,891 badgers were killed across 1,000 square kilometres. That works out as approximately 1.3 badgers per year per square kilometre—not a huge kill when you think about the number of badgers in the area. There are huge question marks over the level of kill in the report from John Bourne, and there is conflicting evidence. There is evidence that it was as low as 20 per cent, but when the report was packaged and put together, it was claimed to be 70 per cent. For the majority of people who have read the report, those figures are not acceptable.

[34] **Mick Bates:** So the report uses an average figure to show the trapping rate and how successful the culling has been?

[35] **Ms James:** That is right—there were 10 trial areas, and the success of the trapping varied from area to area. It varied from 20 to 70 per cent.

[36] **Mick Bates:** Fine. If I could carry on, then, you mentioned earlier this concept of perturbation. Is there a relationship between the efficiency of the trapping and the dispersal of badgers from that area?

[37] **Ms James:** Definitely.

[38] **Mick Bates:** Tell us more about that. How does it operate?

[39] **Ms James:** Badgers live in social groups and if you disturb them, and there are no hard boundaries, then they will migrate. That is why Dai emphasised the importance of having hard boundaries—otherwise they will migrate out of those areas and take the disease with them. That is why you saw a reduction in the disease within the zone, but an increase in the level of infectivity outside that zone—because the badgers had actually migrated out of the area.

[40] **Mick Bates:** You could say that this was a study in the dispersal of TB then, rather than the control or the eradication of it.

[41] **Ms James:** That is why I say what this report has actually shown—and this reiterates what we knew previously—is that this is not how you do it.

[42] **Mick Bates:** Further to that, how do you suggest that we control TB in wildlife?

[43] **Mr James:** May I come in on this point? I am interested in the fact that you as a group are going to visit Ireland, because that is what Ireland has got. The ISG stopped that kind of reactive culling in 2003, because it was said that it was spreading TB, and, on balance, causing more of a spread than a reduction. Yet in Ireland there is still reactive culling, but using a different system of catching badgers—stop-snares are used intensively, and that is managed intensively, and Ireland is showing a reduction of 42 per cent as a result. So we need to look at research done in other parts of the world.

[44] **Mick Bates:** If I may follow that up, Chair, are you saying categorically, in contrast to the conclusion in paragraph 4 of the report, that there are ways of culling that will stop perturbation?

[45] **Mr James:** I think that there is evidence of that in Ireland, absolutely. However, it is continuous—it is not a case of doing it for a couple of days and then stopping, it is something that you have to continue over a period of time.

[46] **Mick Bates:** For how long?

[47] **Mr James:** I think the Irish will give you the answer to that one.

[48] **Mick Bates:** You do not have any idea of how long it would take?

[49] **Mr James:** It is years as opposed to months. There is lots of work going on in this country in terms of polymerase chain reaction, which has not been talked about. I think that, down the line, we could use some further tools—and I would welcome the reconvening of the TB action group, because we were involved in some of that work. We need to set up this intensive treatment area for the wildlife group, and perhaps we can include a lot of these other forms of trapping and use some of the work that has been done in Warwick to at least help Warwick in its research on polymerase chain reaction at the moment in this intensive treatment area in Wales.

[50] **Mick Bates:** Could I just return to this issue of time? In Australia, it took 10 years to eradicate the disease. Do we have any indication, if we aimed to eradicate TB in Wales, of the timescale for that?

[51] **Mr Davies:** It all depends on what steps you are prepared to take. The more radical the steps you take, the quicker it will be eradicated. For example, the Krebs report took 10 years and £50 million, but how further forward are we now, really, because it did not deliver any conclusions?

[52] Coming back to perturbation, you must remember that it works in two ways, which is why it is so important to have hard boundaries, because you certainly do not want to have fresh, clean badgers entering infected areas in the short term. Therefore, you prevent infected badgers from moving out and clean ones from coming in. If you look at a map of the Welsh area, you can see natural boundaries, and I point out that on one side of the Tywi there are annual testing parishes, but the other side is very different. So, it is possible to get hard boundaries within Wales—it is probably easier than in other parts of the UK because we have peninsulas, big rivers and urban areas that are natural hard boundaries. If you do not have hard boundaries, you must try to create soft boundaries by using the clean ring test that was used in the Offaly trials in Ireland. So there are different ways of doing that.

[53] **Ms James:** I will just add to that, if I may. The ISG report says that a cull would not provide meaningful results, but there is a contradiction there because there is supporting evidence from Professor Rosie Woodroffe in a supplementary paper that shows that where there were water courses, albeit small ones, the level of boundary permeability was significantly reduced. That occurred in two very different areas. One of the areas where there was a significant reduction was Cornwall, for example, which, geographically, is obviously very different from Hereford. However, both areas showed a very significant reduction in the extent of perturbation where water courses are involved. So, there is an inconsistency in terms of the scientific evidence that ISG itself is presenting.

[54] **Brynle Williams:** This hard boundary issue has been overlooked and I agree that it is essential that we use these hard boundaries. On badger setts, trapping, and so on, do you agree

that we need to destroy setts when infection is found because of perturbation and movement back in?

[55] **Mr Davies:** Steve can come in on that, because there are ways and means of decommissioning them or sterilising them.

[56] **Mr James:** Again, work is being done on this in Warwick; they call it 'decontaminating'. They are at the very early stages of that. However, the work is being done. Mick asked how long it would take—how long is a piece of string? We have been doing this for 14 years now, not 12, Dai—it does not seem that long, but it is surprising. In 10 years' time, I do not want my grandchildren to be farming in the same situation that I am in, so we have to use all the tools that are out there. Vaccination is in the pipeline, but remains 10 or 15 years away. It will be the vaccination of wildlife as opposed to the vaccination of cattle, but there are tools available and we need resources to develop them. We also, as I said earlier, need to get the action group back up and running to be part of building this evidence over a shorter period rather than a longer one.

[57] **Mr Davies:** Following on from that, the initial thing that you have to do is to clear out the disease or the diseased animals, but I accept that at some stage or other, we need a mechanism to reintroduce healthy badgers. The idea is not to eradicate badgers from any area—at a certain point, we have to support bringing them back, but they will be healthy badgers at that time.

[58] **Brynle Williams:** My concern lies with the setts. You have just explained the sterilisation of the setts, but I understand that these bacteria could live for up to six months underground—no-one knows. So, what is the point of removing the source on both sides—agricultural and wildlife—only to allow the reservoir to remain?

10.30 a.m.

[59] **Mr Davies:** If you have hard boundaries, you would not expect fresh ones to move in immediately, but something would have to be done in preparation for reintroducing healthy badgers at some stage or other. Research is being carried out at the moment, and I am sure that there will be some results by then.

[60] **Mick Bates:** The point about hard boundaries was very useful. I am still a bit concerned about how long it will take if we look forward to eradication.

[61] To return to your views about the use of gamma interferon, I note in your evidence your comments about the independent scientific group report. You say that there would be cost implications for the Government here. Could you expand on what you mean? How much would those cost implications be, and where would they arise?

[62] **Mr Davies:** The widespread use of gamma interferon testing, historically, has shown that about 30 per cent extra cattle would be taken out of the national herd. So, that would be a cost implication. However, as I said, if we are serious about getting rid of this disease, we need to accept that it may cost a lot upfront. The Bourne report shows clearly that the cost of this disease to the economy of Wales is in excess of £1 million a week. How long can the Assembly live with that, and how long can the industry and economy of Wales sustain it? Not long, I would have thought.

[63] **Mick Bates:** So, what is the best way of using gamma interferon, if we are to eradicate this disease?

[64] **Mr Davies:** Well, there is no point in using gamma interferon if you are not going to

do anything about the wildlife reservoir. All that gamma interferon testing will do is pick the infection up earlier. If you have severe infection for a very long period, neither the skin test nor the gamma interferon test will pick that up, because the immunity tails off when the infection gets more serious.

[65] **Mick Bates:** If I may pursue that a little further, going with the skin test first, at what stage would you, as a union, recommend using gamma interferon?

[66] **Mr Davies:** You could use gamma interferon at the same time as you do the skin test, provided that you take the blood sample before you do the skin test. You have to do it only once. If we had the system up and running, it would be possible to take a blood sample and then give the animal a skin test as it went into the crush, or whatever system you were to use. That way, the blood would not be contaminated because you would not have done the skin test.

[67] **Ms James:** To add to that, we almost seem to be casting aspersions on the skin test, and we need to remember that it was successful in virtually eradicating TB in the late 1970s and 1980s, when we did not have infectivity in the wildlife population. That is the circumstance that has changed: the badger population has increased significantly and there is a high incidence of TB in the badger population. However, we had virtually eradicated TB in cattle using the skin test in the 1980s.

[68] **Mr Davies:** The value of the gamma interferon test is that we do not have proof of the stage at which an animal becomes infectious. Does the animal become infectious before the skin test is of any use to us? If so, it is useful to have the gamma interferon test, as it means that that animal is removed before it can pass on infection.

[69] **Mick Bates:** I would like to clarify the issue that Dai raised about collecting blood before you do the skin test. At what stage would you test that blood to see whether there was an infection?

[70] **Mr Davies:** It would have to be tested within 24 hours of the blood sample's being taken.

[71] **Mick Bates:** So, you are suggesting that you would test every animal, or just those that—

[72] **Mr James:** Some of the suggestions for the trial group were that you did just that: compare how the skin test and gamma interferon test work together. There are some doubts about the gamma interferon test. It is good for picking up the disease early, but it is not that good at picking up an established disease. I am aware of a farm that has had issues with the test, because the blood has to reach the laboratory well within 24 hours and many of the samples have been spoilt. That is an issue. So, we need a laboratory in the hot-spot areas. That is a priority if we are to use gamma interferon. However, the ideal place to use it is in those areas where the disease is creeping in, to stop it at the early stages and to pick it up sooner rather than later. Where it is an endemic problem, I would agree with Dai.

[73] **Ms James:** There is a further issue here in terms of resource, and that is the speed at which reactors are removed once you have a positive test result. We had a situation earlier this year in which an inconclusive test had been taken and, by the time the next test came, reactors still had not been removed from farms. So, there are also resource implications here for the Assembly Government in moving stock on.

[74] **Mick Bates:** Did the animal have a name like 'Shambo'? [*Laughter.*]

[75] **Ms James:** I could not possibly comment. [*Laughter.*]

[76] **Alun Davies:** Let us move on quickly.

[77] **Brynle Williams:** I am sorry for personalising this issue, but you are right about TB treatment in hot spot areas. Are you finding any benefit from it?

[78] **Mr James:** Ironically, we have more problems now than when we started it, but that is a personal issue. To be fair on the biosecurity, all of us as personalities are different—all of us in our farming practices do things differently; the point is to make farmers more aware of the situation. One of the main issues is buying cattle in; replacing animals is one of the biggest risks. We are aware of that but, to a farm that has lost 50 animals, it is impossible to carry on economically without buying replacement animals. There are certain areas where it can be done and certain areas where it cannot. They have created a toolkit on a laptop, and so the practising vet who visits the farm asks the question, such as ‘Do you buy cows in?’, and the farmer answers and the vet inputs the answer to the laptop. At the end, there is a score that tells the farmer whether his biosecurity is good or not. There are minor parts to the toolkit, such as access of wildlife to feed troughs or feed stores. It is about making farmers more aware of this issue. As a group, we gave a presentation to the Department for Environment, Food and Rural Affairs conference at Westminster last May. There is much interest in this issue, particularly from the south west, to make farmers take ownership of the disease. So, that is what we are doing. There has been a 70 per cent take-up of this intensive treatment area in our patch, and that goes to show that farmers are taking ownership of this matter, which is the question that you asked earlier, Brynle.

[79] **Brynle Williams:** On that issue again, have you seen an increase in wildlife on your farm? It seems that you are doing everything on the model farm except for one thing; after 14 years, we should be seeing an end to TB on your particular holding.

[80] **Mr James:** Nothing has been done about the wildlife, and that is why we are in this situation. We have a closed herd, by the way. We buy a bull in every three or four years. In fact, our bull is a reactor this time. He has been with us for three years, but he has to go. So, I will have to buy in a bull in September, and I will make sure that that animal does not bring disease onto my farm. I would be absolutely certain about that.

[81] **Mr Davies:** I think that the industry will shoulder the responsibility—and that has been shown clearly in Steve’s area with 70 per cent take-up of this—but it shoulders the responsibility in anticipation of the UK Government and, in our case, the Assembly shouldering the responsibility at some stage of doing something about wildlife. How long can you expect the industry to carry on moving from one stage to the next, and so on? The anticipation is that the Assembly will shoulder the responsibility at some stage, and will do something about wildlife. We are getting pretty close to that at the moment.

[82] **Alun Davies:** You have information that I have not received. What would an NFU programme look like if, for example, I were to say to you, ‘We want to eradicate TB in Wales in the next year’? Where do you start? What would be steps 1, 2 and 3?

[83] **Mr Davies:** We have presented it pretty well. You need to map an area with hard boundaries, and have a programme for reducing the numbers of badgers in that area. The quicker and more intensive it is done, the better. After that has been done and you have got rid of the disease, you need to have some mechanism in place for reintroducing healthy badgers to the area. If the Assembly is serious about reducing this disease, the industry will be 110 per cent behind it. We have been able to sell this programme to 70 per cent of farmers, but I am sure that you would get 100 per cent of farmers supporting it if they could see that there is a light at the end of the tunnel. We do not have a light there at the moment.

10.40 a.m.

[84] **Alun Davies:** Most of the recommendations of the independent scientific group's report are about cattle control issues. We have not really touched on those this morning, having concentrated more on other aspects. Can you, for the record, give your response to those recommendations?

[85] **Mr Davies:** We are disappointed that the report does not contain any cost-benefit analysis. It has costed everything else, and has justified—or tried to—that you should not cull badgers willy-nilly, but it has not actually entered into the equation the extra costs of these extra cattle measures to the industry and to the Assembly.

[86] **Ms James:** We were particularly concerned about a proposal, effectively, to zone the country. Our concern is that you will start to restrict how farmers are able to market stock. The fear is one of perception, as there is not an issue of risk here, because it would be very easy for retailers, for example, to say, 'Right, we regard that as a high-risk area, so we are going to source our stock from areas outside it'. The great danger is that you end up with a two-tier pricing structure—at a time when those very farmers have the burden of the cost of trying to deal with this disease situation. So, it is a double whammy, if I can put it that way, for those particular farmers.

[87] The other issue is that we have the European Commission's Food and Veterinary Office visiting in August. The commission will come over here expecting to see us operating an eradication strategy, but we feel that all we have at the moment is a partial strategy, which does not engage with the wildlife side.

[88] **Mr Davies:** I spoke to the commissioner this spring, and he told me of his intention to send a group of people over to look at it. He told me, 'You have a lot of things going on over there, but I cannot see that you have a strategy for it'.

[89] **Mick Bates:** On the economic costs and the cost-effectiveness of this, you are in daily contact with your members. Can you give some indication of the human costs involved when TB is identified on a farm?

[90] **Mr Davies:** It is difficult to measure human costs, but the report of the Independent Scientific Group on Cattle TB estimates that it costs every farm that is under restriction £27,000 on average. That is a financial cost that is relatively easy to measure. However, we know of domestic problems because of TB, including divorce, stress and even mental breakdown. We know of one incidence in Pembrokeshire in which a lady lost her husband and her farm was locked up for five years, leaving her to struggle on with the pressure of having lost her husband as well as the pressures of not being in a position to get rid of her farm.

[91] **Alun Davies:** I want to bring this session to an end, now, but, in closing, part of our remit in this inquiry is to look at the recommendations of the former Environment, Planning and Countryside Committee report on this subject. Is there anything you would like to say in conclusion? You have already said in evidence that you think that the TB action group has done a reasonably good job. Is that a fair summation of your views?

[92] **Mr Davies:** It is fair, and we would be happy to see it continue—100 per cent.

[93] **Alun Davies:** Do you have any other comments to make on the way in which the Assembly Government has implemented the EPC committee report's recommendations on bovine TB?

[94] **Ms James:** We are disappointed that there was strong advocacy in the EPC committee's recommendations following the inquiry for an holistic approach to be taken in this matter. Three years on, we do not see that that has transpired.

[95] **Alun Davies:** I would like to clarify one point. When you talk about an holistic approach, what you mean is a policy that includes the cattle control measures that we have seen discussed in the ICG report along with a wildlife strategy of the sort that you described in your evidence. You see those things coming together as an holistic strategy, do you?

[96] **Ms James:** Indeed.

[97] **Mr Davies:** Yes.

[98] **Alun Davies:** Diolch yn fawr am roi o'ch amser y bore yma. Gwerthfawrogaf yn fawr y ffaith eich bod wedi rhoi'r amser i ddod yma heddiw a rhoi tystiolaeth inni. Byddwn yn cysylltu â chi yn y misoedd nesaf. Byddwn yn trafod ein hadroddiad, gobeithiaf, ddiwedd mis Hydref ac yn ei gyhoeddi ddechrau Tachwedd. Bydd gennych gyfle i ddod yn ôl atom os oes rhywbeth ychwanegol yr hoffech chi ei drafod gyda ni yn y cyfnod hwnnw.

**Alun Davies:** Thank you very much for your time this morning. I greatly appreciate the fact that you have taken the time to attend today and present your evidence to us. We will be in touch with you over the coming months. We will discuss our report, hopefully, at the end of October and will publish it at the beginning of November. You will have the opportunity to get back to us if there is anything else that you wish to discuss with us in the meantime.

[99] **Mr Davies:** Diolch, Gadeirydd, am y cyfle i ddod yma, ac am y gwrandawriad a gawsom y bore yma.

**Mr Davies:** Thank you, Chair, for the opportunity to attend, and for the hearing that we had this morning.

10.45 a.m.

**Cyflwyno Tystiolaeth i'r Pwyllgor ar gyfer ei Ymchwiliad i TB Mewn Gwartheg yng Nghymru: Undeb Amaethwyr Cymru**  
**Evidence to the Committee for its Inquiry into Bovine TB in Wales: Farmers' Union of Wales**

[100] **Alun Davies:** Diolch am ddod atom y bore yma. Fel y dywedais eisoes, yr wyf yn gwerthfawrogi'n fawr iawn y ffaith eich bod wedi cymryd amser nid yn unig i ddod yma y bore yma ond i gynnig tystiolaeth ysgrifenedig i ni. Yr wyf wedi cael cyfle i'w darllen ond hoffwn i chi gyflwyno'ch hun a dweud ychydig eiriau am eich tystiolaeth cyn i ni ddechrau trafod.

**Alun Davies:** Thank you for joining us this morning. As I have already said, I very much appreciate the fact that you have taken the time not only to come here this morning but to provide us with written evidence. I have had an opportunity to read the evidence but I would like you to introduce yourselves and say a few words about your evidence before we open up the discussion.

[101] **Mr Walters:** Diolch am y cyfle i ddod i siarad ar ran Undeb Amaethwyr Cymru. Fy enw i yw Brian Walters, is-lywydd Undeb Amaethwyr Cymru. Y bachgen ifanc wrth fy ochr i yw Dr Nick Fenwick, cyfarwyddwr polisi yr undeb.

**Mr Walters:** Thank you for the opportunity to speak here on behalf of the Farmers' Union of Wales. My name is Brian Walters, vice president of the Farmers' Union of Wales. The young man sitting alongside me is Dr Nick Fenwick, the union's policy director.

[102] Yr wyf i yma yn lle'r cymeriad cryf hwnnw, Ifan R. Thomas. Yr ydych yn ei adnabod ef a'i wybodaeth helaeth ar y testun hwn. Nid wyf yn dweud y byddaf yn cymryd ei le ond y mae wedi gofyn imi ddod i mewn yn raddol yn ei le.

I am substituting for that strong character, Ifan R. Thomas. You will know of him and his knowledge on this issue. I am not saying that I will fill his shoes but he has asked me to gradually take his place.

[103] Yn gyntaf, fe ddywedaf ychydig am fy fferm i. Mae gennyf fferm laeth organig y tu allan i Gaerfyrddin. Bûm mewn sefyllfa rhyw ddwy flynedd yn ôl lle'r oedd ein gwartheg yn dioddef o TB. Fodd bynnag, ar ôl gwneud profion trylwyr mae'n ymddangos ein bod yn glir ar hyn o bryd ond yn wynebu prawf ar y fuches gyfan ddiwedd mis Awst. Os oes un ohonoch heb gael y profiad o weld buches yn cael ei phrofi, mae gwahoddiad i chi ddod gyda'ch 'oilskins' i'n gweld ni yn cynnal y prawf.

First, I will tell you a little about my farm. I have an organic dairy farm outside Carmarthen. I faced a situation some two years ago when our cattle were infected with TB. However, thorough testing shows that we are clear at present but we will be subject to a whole-herd test at the end of August. If any of you have not experienced the herd-testing process, you are welcome to join us in your oilskins for that particular test.

[104] Nos Sul, wedi dod i Lanelwedd ar gyfer y sioe, cyfarfûm â chwpl o'r Alban. Synnais eu bod yma, a'u bod wedi dod yma bob blwyddyn ers 40 mlynedd. Y neges bositif oedd eu bod yn dweud mai'r sioe hon oedd yr orau yn y byd. Serch hynny, yr ochr negyddol i'r neges oedd eu bod am ddod â gwartheg yma ond eu bod yn ofni mynd â TB yn ôl i'r Alban. Yr wyf hefyd wedi cael ar ddeall yn ystod y diwrnodau diwethaf bod rhai bridwyr enwog yng Nghymru—un, yn arbennig, sydd wedi dweud hyn wrthyf yng ngogledd sir Gaerfyrddin—yn methu ag allforio teirw cig eidion i rannau eraill o Brydain, heb sôn am y cyfandir. Er nad yw erioed wedi cael TB ar ei fferm mae'r ffaith bod cymaint o achosion TB yn y gorllewin yn ei rwystro.

On Sunday evening, having come to Lanelwedd for the show, I met a couple from Scotland. I was surprised to see them here, and that they had been coming every year for 40 years. They had a positive message, saying that this was the best show in the world. However, their negative comment was that they wanted to bring cattle here but that they were scared of taking TB back with them to Scotland. I have also been told over the past few days that some well-known breeders in Wales—one, in particular, who has mentioned this to me in north Carmarthenshire—are unable to export beef bulls to other parts of Britain, let alone to the continent. Although he has never had TB on his own farm the fact that west Wales is such a TB hot spot prevents him from exporting his cattle.

[105] I was pleased to hear you mention eradication here this morning, because, too often, I have heard Ministers—different people in the past—talk about 'controlling TB'. I hope that it is the ambition of the National Assembly to have an eradication policy. I think that it is a legal requirement of Europe that we have to have that sort of aim in mind. To do so, you need an adequate budget, which I hope the National Assembly will provide. I know that costs are increasing, but spending more now may save money at a later date. I know that the resources are stretched at times; perhaps they have been stretched by events in my locality or in the neighbouring parish of Llanpumsaint, on which I will not dwell.

10.50 a.m.

[106] However, that lack of resources has been highlighted in my brother-in-law's situation. He is a farmer in Cardiganshire who has been under restrictions for two years. He had one animal tested as positive on 23 June, but the animal has still not been picked up and valued.



Something is wrong in the system if that has not been dealt with. It is a common factor throughout many farms. It is understandable when there are some 40 or 50 animals going from the same farm but when there is only one animal, surely there should be urgency in controlling the spread of TB within that herd. The implications for him are overstocking and having to rent more land. You mentioned the cost implications previously with the NFU; I do not have figures for you, but I know that he has had to rent about 80 acres more land, because he has a dairy herd. He cannot sell any of his replacements off, and there is the stocking rate to consider. Some nice beef calves—Belgian blue calves, which are crosses from his dairy herd—that he would like to sell on are building up. They are all building up on the farm and he has those costs too. I will pass on to Dr Nick Fenwick; he will address you now.

[107] **Dr Fenwick:** Diolch yn fawr, Mr Cadeirydd. Thank you for the invitation to come here. As you will know, we have had a relatively short amount of time to prepare our submissions and to digest the ISG report at what is a busy time. Nevertheless, we welcome this opportunity. I will dive straight in and summarise our position in terms of the ISG report. Two major issues have been identified by the science. We have no doubts about the science and would not question it; this is a very important publication in terms of showing us the reality of the relationship between badgers and cattle in terms of TB transmission.

[108] The most significant aspects are that, in the absence of perturbation, we have a reduction of about 50 per cent of TB in cattle; that is despite a relatively inefficient removal of badgers. I think that the percentage of badgers that were left there after five years of cattle is a significant proportion of the number of badgers that were in Ireland before it started culling badgers in its four area trials. When we ignore the perturbation effect that is caused by badgers going back and forth between the culling areas, we have one of the most significant reductions in TB that has been seen in the UK in recent years, certainly since the early 1980s.

[109] Perturbation is obviously the other important aspect, and it is worth noting that perturbation was recognised as a probable problem by the Irish when they designed their trials, and they managed to effectively eliminate that problem and reduce TB by a significant amount more than in the randomised badger culling trials.

[110] Geographic boundaries were used to prevent perturbation in Ireland and are clearly an important part of what would be needed were culling implemented. However, we are not necessarily speaking just about geographic boundaries, as there are other boundaries that are perhaps less visible. For example, boundaries can be formed by areas in which badger populations are relatively low or non-existent, or where cattle numbers are low.

[111] There is also the possibility, referred to in the ISG report, that biosecurity might be an effective measure in preventing the transmission of TB between badgers and cattle. If it is right in suggesting that, there is clearly a possibility that biosecurity could be used to prevent perturbation; it naturally follows that that is the case. We find it extremely frustrating that the group has clearly spent money on providing a cost-benefit analysis regarding its scientific trial, but it has not provided the same cost-benefit analysis for increased cattle controls and the effect that they would have. It has highlighted the importance of perturbation, yet it has not made a significant investment in investigating geographic boundaries. It makes off-the-cuff remarks about geographic boundaries not existing in the UK, yet it provides no significant data whatsoever to back that up. Ireland had no problem finding such areas; we have significant, large areas in Wales with those geographic boundaries, and it does not take a great deal of thought to identify them. The Gower is just one example that springs to mind.

[112] The ISG advocates stepping up cattle control. If we break things down to the most basic ultimate cattle control, which would be, possibly, to move all cattle from a TB-infected area and repopulate that area with cattle, say, from the north of Scotland, that are guaranteed to be 100 per cent healthy, given that the ISG has proved that at least 50 per cent of TB

incidences are derived from badgers and that badgers within hot spots tend to be infected—our own work in Wales has highlighted the high proportion of badgers that are infected in our own hot spots—within a matter of months, or even weeks, cattle would go down with TB again, and that is when cattle controls would have been taken to the extreme, by eliminating all cattle and reintroducing healthy cattle. So, ultimately, we can clamp down on cattle to a greater extent, but, as long as we are ignoring 50 or 60 per cent of the problem, which is infected wildlife, it seems that we have only two options: either we control the disease in wildlife or we get rid of cattle farming in areas where badgers are infected. That would have catastrophic effects on the environment, because there is a clear relationship between farming practices and the wildlife that the general public values so much.

[113] As I have said, we do not doubt the science that underlines the ISG's conclusions, but we certainly have major problems with its recommendations. In terms of the EPC committee's recommendations, we support the broad principles and we recognise that it was a significant step towards dealing with the disease. The word 'holistic' was emphasised, and you have already clarified what we mean by that, which is to deal with all TB vectors between all animals. However, we would question whether the intensive treatment areas, as they now stand, are genuinely intensive, because our idea of intensive treatment would be that all disease vectors would be dealt with. Biosecurity can only be limited in terms of preventing the transmission of TB from badgers to cattle as long as cattle are out grazing and sharing pasture with badgers.

[114] **Alun Davies:** Diolch am hynny. **Alun Davies:** Thank you for that.

[115] I thought that you were going to shock me for a moment when you said that you would not question the science of the ISG report; I thought that you were going to complete your sentence by welcoming it. However, you did not do that. Before bringing in Mick and Brynle, I would like to push you a little on this. I do not understand how you can not question the science but not accept the recommendations.

[116] **Dr Fenwick:** As I said, we certainly welcome the science. It has emphasised the level of transmission between badgers and cattle, which I would say is at least 50 per cent; in some areas, we could be talking about 80 or 90 per cent, and there is obviously going to be a huge range of areas. So, that is an important scientific fact, which it has clearly shown. It has also emphasised the importance of having boundaries, be they geographical or less visible in terms of preventing perturbation. It has highlighted the importance of considering perturbation when designing any culling strategy, and that is to be welcomed. However, it is extremely defeatist of the scientists to show that such a high proportion of TB is derived from animals and then to say, 'We cannot deal with the issue and we are just going to concentrate on cattle'. They have highlighted the fact that there is a significant challenge and, in many ways, they have highlighted how culling should not be carried out. However, to consider what is at least 50 per cent of the problem and say, 'We give up', is hardly a scientific approach and it is not how science has progressed throughout history.

[117] **Alun Davies:** So, you are taking a pick-and-mix approach; you will take the stuff that you like and reject the stuff that you do not.

[118] **Dr Fenwick:** That is precisely what the ISG has done; it has said that perturbation is a problem and that it does not see any way around it.

[119] **Alun Davies:** But is that not what you are doing this morning? You are saying, 'We welcome this as this agrees with where we are coming from and our position, but we are going to reject everything else because, from our perspective, we do not like it'.

11.00 a.m.

[120] **Dr Fenwick:** The scientific evidence points to the fact that at least 50 per cent of the incidences of the disease come from wildlife. It highlights that that needs to be addressed and how successful a culling strategy was when, given the shortcomings of its own strategy, following the fourth cull, a significant increase in TB reduction was shown within the culling area and the perturbation effect was significantly reduced, to around 8 per cent. So, its conclusions do not ring true as far as its results are concerned.

[121] There are shortcomings in the evidence, in that it has not fully presented evidence that supports its view that there are no geographic boundaries within the United Kingdom. For example, take somewhere like the Berwyn mountains. We have a TB problem in the Tannat valley on one side of the Berwyn mountains, and you have a clean area in the Bala region, which is on the other side of the Berwyn mountains. Not only is that a geographic boundary, it is also a boundary where there are no badgers, so perturbation could not be a problem in that context. Also, there are very few cattle grazing there, so it is not a problem in terms of perturbation on that level. Now that is just one example off the top of our heads. There are so many more.

[122] **Brynle Williams:** I am interested in the cattle-to-cattle movement and what have you. I visited Ireland a few years ago, and Ireland makes far more use of its cattle tracking system, yet no-one has made any reference to that, not even the ISG. We are supposed to have one of the most up-to-date cattle tracking systems, but no-one has picked up on it. What are your views on that? Can much better use be made of the tracking of cattle? We know where every cow is, but we do not know where every human being is in the UK today.

[123] **Dr Fenwick:** Certainly, better use could be made of the British Cattle Movement Service database. It is unfortunate that there was a contract with IBM, I believe, and that it was effectively farmed out. The access to that database is relatively restricted in terms of, for example, veterinary research.

[124] Sorry, what else did you ask about?

[125] **Brynle Williams:** I mentioned that Ireland uses its database far more effectively than I believe that we have done here. I do not believe that there is any reference to that in the evidence here, nor in the ISG report. It is a very pertinent fact that we can track these cattle anywhere we want in the country within 48 hours maximum. The other thing that I find very disturbing relates to two things that Brian said. You said that we are already seeing zoning—although it is not official—because cattle cannot be sold out of certain areas and, more importantly, that cattle are left on farm. Is there any wonder about the situation? It has said that they should be moved, but they are not getting moved.

[126] **Dr Fenwick:** Perhaps it is worth emphasising that while the ISG was perhaps right in suggesting that—cattle traceability is fine, but the BCMS database is not being used as much as it possibly could—it should also be remembered that ISG did have some problems in understanding what BCMS was and how movements were recorded, given that it reported that there are 14 million movements per year, without realising that each movement is doubled up because of the way in which movements are recorded. Also, a significant proportion of those movements are movements to slaughterhouses, so, ultimately, they are insignificant in terms of disease transmission. So, there were some obstacles to ISG's understanding of what BCMS does and I think that the final figure was a small percentage of what the ISG had thought were the number of cattle movements in the UK.

[127] **Mick Bates:** Thank you very much for your evidence. I note that the use of the word 'eradication' is very important in this, as is a satisfactory budget in order to implement any eradication strategy. I assure you that we will be asking those questions of the Minister when

we scrutinise her on how she is going to eradicate TB.

[128] I would like to return to the issue of perturbation, because it is such a significant issue in undermining the whole design of the trials. How would you go about mitigating the perturbation effect if you were designing the trial?

[129] **Dr Fenwick:** The first step would be to have a proper assessment—I assume that we are talking about Wales—of what geographic boundaries exist. That would be done, I assume, by a professional geographer but biologists, or ecologists, would also need to be involved in terms of assessing regional badger populations. Organisations such as the British Cattle Movement Service would also have to be involved in terms of assessing regional cattle numbers. Areas in which there are low densities of cattle, or no cattle, will clearly not be a problem in terms of perturbation. Similarly, areas in which there are low numbers of badgers will not cause perturbation. We have significant mountain ranges in Wales, and significant rivers and so on. So, the first step would be to establish areas in which there are geographical or other effective barriers. That work has not been done as yet. I understand that some initial work is being undertaken by the Assembly, which we welcome, naturally. That work needs to be accelerated, and it is something that we have been asking for for a number of years. Almost three years ago, we submitted a paper at the second TB action group meeting in which we advocated that that assessment needed to be undertaken and that geographic boundaries were an important part of preventing perturbation. However, that work is only just being undertaken. [*Interruption.*]

[130] **Mick Bates:** We have some competition from the singing next door. I am not familiar with the words of this song.

[131] **Alun Davies:** I am not going to hand out song sheets.

[132] **Mick Bates:** You mentioned a figure of 50 per cent. Can you give me more information about how you arrive at this figure of an eradication rate of 50 per cent for the disease?

[133] **Dr Fenwick:** There is a graph on page 99 of the ISG report in which the beneficial effects of what we would regard as not exactly efficient badger culling are plotted against the distance from the outside of the culling area. The closer you are to the outside of the culling area, the more significant the perturbation effect would be, because that is where the badgers are travelling in and out of the culling area. The badgers from outside the culling area are too far away to travel to the core of the culling area. So, ultimately, perturbation is not a problem in those core areas. The relationship between the beneficial effect and the distance from the perimeter of the culling area is plotted. The average figure for the effect over five years is in the early twenties: there is around a 23 per cent or 24 per cent reduction in TB. However, in terms of the core areas, where we can ignore perturbation, the reduction in the incidence of TB is down to 50 per cent. In addition to that, it is worth bearing in mind that, on that same page in the ISG report, there is also a plot of the effect after each year of culling. After the fourth year, the reduction in the incidence was some 32 per cent—I am estimating these figures from the graph. There was a 32 per cent beneficial effect, compared with around an 8 per cent negative effect on the periphery of the culling area. If you combine those two aspects, one might ask what the reduction in the incidence of TB in the core area was after the fourth cull, because that figure of 50 per cent is likely to be increased significantly. So, in the fifth year of culling, you could imagine perhaps a 60 per cent or 70 per cent reduction in the incidence of TB, which would be a major breakthrough in TB control and would reverse the decline in our TB status that started in 1986.

[134] **Mick Bates:** Thank you, that is really interesting. That is why, I suppose, you said early on that you accept the science of this report, because figures such as that show a

significant reduction. A man was employed to assess the cost effectiveness of culling. What would be the cost effectiveness of this, taking your figures in the core area?

11.10 a.m.

[135] **Dr Fenwick:** First of all, on cost-effectiveness, we have to bear in mind that EU legislation requires that we at least attempt to eradicate this disease. There is a whole range of disease-control measures in the UK, for all sorts of diseases, that may not necessarily be cost-effective if you sit down and work them out on paper. One might well argue that the national health service is not cost-effective—if we allowed people to die of disease, that might be a lot cheaper than running a national health service. However, the principle is that we need to eradicate the disease, and, ultimately, the long-term savings will be £80 million per year, and so ultimately the books will balance.

[136] Secondly, I am not at all happy with the cost-analysis itself, because it is not a cost-analysis of a policy, but of a scientific trial, and as such I regard it as a bit weak. Nevertheless, even that cost-benefit analysis says that, were you to have a scenario in which perturbation was not a problem, and more efficient culling was carried out, it would be cost-effective.

[137] **Mick Bates:** I will continue with gamma interferon. One of the issues raised earlier was the testing regime, and I am curious as to how you think gamma interferon testing fits in with the better control and eradication of the disease.

[138] **Dr Fenwick:** Gamma interferon testing is clearly important in areas where the disease is not a significant problem in wildlife. For example, if you have a very clean area, perhaps in the centre of Gwynedd, for example, where TB rears its ugly head, but has not yet jumped the species barrier to badgers, then in order to be certain that you get rid of it before it jumps the species barrier, or indeed spreads to neighbouring herds, gamma interferon testing can be used and is a useful tool in eradicating the disease and providing more certainty than one might have with the skin test. The skin test is a reliable test that has been used for 70 years to eradicate TB, but nevertheless, gamma interferon testing is an important tool in that context. However, it is questionable as to how effective it would be in killing significantly greater numbers of cattle in areas where perhaps 60 per cent of the disease derives from wildlife—ultimately, 60 per cent of the problem would be left in place. So, when new animals are moved in, they will inevitably become infected. Is that cost-effective given the compensation paid for those extra animals that are removed?

[139] **Mick Bates:** Earlier, we heard from the NFU about taking blood tests at the same time as the skin test. Is that a viable option? Would it prove too expensive, or would it be useful?

[140] **Dr Fenwick:** I think that it would need to be assessed properly. If it happened at every test it might be questionable. The Welsh Assembly Government has already rolled out the use of gamma interferon testing to try to protect clean areas in particular, and to deal with certain scenarios. Across the board, I think that we would generally support the use of gamma interferon testing in that way, but to roll it out as a kind of magical cure, when 50 or 60 per cent of the problem is allowed to continue in hot spot areas, would clearly not be cost-effective. We must bear in mind that, across the board, cattle movements play a role in transmitting TB to clean areas, but 80 or 90 per cent of TB incidence occurs in hot spot areas, and the work of the Welsh Assembly Government on the found-dead badgers survey has shown that TB hot spots correspond with TB in badgers. The other thing that we need to bear in mind is that the post-mortem examinations done on badgers are guaranteed to produce an underestimate of the proportion of TB in badgers. So if we have an area in which 25 per cent of badgers were identified as having TB, that 25 per cent is guaranteed to be an underestimate, because the post-mortem will always miss some TB.

[141] **Mr Walters:** I am concerned about the bashing of the skin test over the last few years. It was that system that practically cleared this country of TB 30 years ago, and reduced its incidence from 60 per cent to 0.6 per cent. If it is not that effective, why are we using it in pre-movement testing?

[142] **Mick Bates:** Given that we can mitigate the perturbation effect—although the testing regime, as you suggest, would be useful—give me an indication of how long it would take to eradicate the disease in Wales. I heard the NFU's answer, but is it possible to have some indication of this?

[143] **Dr Fenwick:** The randomised badger-culling trials looked at five years. Five years would certainly be far too short a period now. We would be looking at 10 or 15 years, not just for carrying out the work, but also for monitoring the effect of that work. We agree with the NFU entirely in that we are not talking about badger eradication; badgers are one of the most popular species in the UK, but also one of the most overprotected. I live in an area where there are significantly more badgers than there are foxes. Some farms have more badgers than they do rabbits, which is a ridiculous scenario. To repopulate the areas with clean badgers would be desirable because no-one wants to get rid of badgers—they are a fantastic species. However, we also need to deal with the problem in cattle in that intervening period. Once we have removed the significant proportion of that risk by removing badgers, we need to get rid of the disease in cattle, because it is a circular disease: it goes back and forth between the species. There is no point in reintroducing healthy badgers to an area if they will then pick up the disease again from cattle. So, you need to eradicate the disease to as great an extent as possible before reintroducing healthy badgers.

[144] **Alun Davies:** Thank you for that. Brynle did you want to come in?

[145] **Brynle Williams:** Yes, please. It may sound like a lighter note, but it is not. What are your views on the feasibility or practicability of keeping wildlife totally away from agricultural land?

[146] **Mr Walters:** I do not think that that is practicably possible. As an organic farmer, the rules tell me that I have to put my livestock out to graze all summer. I have nice land and land that borders on woodland, within which there is some grazing land. I could lose 20 to 30 acres in one valley if I had to fence my stock off from that valley. Similarly, can I fence wildlife off my fields? I do not think that that is practicably possible. I do not see how it is possible to fence off hundreds of acres just to keep wildlife out.

[147] **Alun Davies:** Most of the independent scientific group's recommendations, as we discussed earlier, relate to issues of cattle control. That has not been discussed widely this morning. Do you wish to comment on those recommendations?

[148] **Dr Fenwick:** If we were able to tackle the disease in a genuinely holistic way, it may well be worth intensively treating the disease in all animals affected by it. However, to treat it intensively in half of the animals affected is clearly counterproductive. It has been shown in the last 20 years that that is not cost-effective; we have seen an exponential growth in the incidence of TB in cattle. The cost of the disease has gone through the roof. The number of cattle killed in 1986, when they abandoned significant badger culling, was in the low hundreds, but that is now up to tens of thousands.

[149] **Alun Davies:** You seem to be saying that there is no role for any level of cattle control.

[150] **Dr Fenwick:** No, what I am saying is that there is no point going after one half of the

problem and ignoring the other half. If we were able to treat the disease in cattle more intensively and treat it in badgers intensively, perhaps that would be worth while, because it would quickly eradicate the disease in all sources. However, to go after one half of the problem while ignoring what the ISG has shown to be at least 50 per cent of the problem is clearly not worth while.

11.20 a.m.

[151] **Mr Walters:** What increase in controls can we impose? If a farm is infected, there is no movement. Now, if we want to sell stock, we are pre-movement tested, so how can you increase control over the movement of animals? Any stock that I bought in recently, I asked permission to buy in, and the infection that I experienced two years ago came from home-bred stock.

[152] **Alun Davies:** There are two elements to the evidence that we are taking this morning. The first is the independent scientific group report, and the second is the Environment, Planning and Countryside Committee report and the work of the Welsh Assembly Government since then. In your evidence this morning, you have not mentioned your views on the TB action group, and so I would be grateful if you could do that now. I also ask you to spend two minutes telling us your views of the Welsh Assembly Government's implementation of its policies.

[153] **Dr Fenwick:** We would like to see the TB action group continued in one form or another, whether that means a change in nomenclature or whatever. We believe that it is important that the good work that it has done be continued.

[154] **Alun Davies:** Do you wish to propose any changes?

[155] **Dr Fenwick:** We would have to consider that in light of any proposals that the National Assembly for Wales brought forward.

[156] On the broad work of the Welsh Assembly Government, on average, we have been ahead of England in at least trying to be proactive, particularly in the context of intensive treatment areas. However, we face the same 'politically correct' challenges, if you like, as England, in that people perceive badgers to be rare, which they are not; they are one of the most common mammals in the UK. We have the ironic situation in which badgers massively outnumber deer in Wales and yet it is legal to go out to shoot a deer in Wales—the Forestry Commission does it all the time—yet you can go to prison for killing a badger that is extremely problematic on your land. The Government has a role to play in educating the public about badgers. It is no good saying that the public does not like the thought of badger culling; the Government has a role to play in educating the public about the fact that badgers are very numerous and problematic—and not just in terms of TB but in a range of ways. It is unfortunate that the easy option has been taken by a broad range of politicians from all parties.

[157] **Brynle Williams:** We have heard the scientific argument, and we have heard that which you put forward this morning and that of the NFU, but nobody has said anything about the opening statement that the culling of wildlife is politically not acceptable. How do you envisage our tackling this? If you do not accept that you have to tackle wildlife, you are never going to get to grips with this disease.

[158] **Alun Davies:** That sounds like a rhetorical question. I think that we will finish on that. Thank you for your evidence this morning. We will now ask the Country Land and Business Association to come to give evidence.

[159] **Mr Walters:** Thank you for the opportunity to give evidence. We hope to contribute again.

11.25 a.m.

**Cyflwyno Tystiolaeth i'r Pwyllgor ar gyfer ei Ymchwiliad i TB mewn Gwartheg  
yng Nghymru: Cymdeithas Tir a Busnes Cefn Gwlad Cymru  
Evidence to the Committee for its Inquiry into Bovine TB in Wales: Country  
Land and Business Association Wales**

[160] **Alun Davies:** Diolch am ddod atom y bore yma. Fel y dywedais wrth bobl eraill, yr wyf yn falch eich bod wedi derbyn ein gwahoddiad, ac yr wyf hefyd yn diolch i chi am y dystiolaeth ysgrifenedig yr ydych wedi ei rhoi i ni—yr ydym yn gwerthfawrogi hynny. Yr wyf yn ymwybodol eich bod wedi cyflwyno tystiolaeth eisoes yn ystod trafodaethau eraill cyn etholiadau'r Cynulliad ym mis Mai. Gofynnaf i chi gyflwyno'ch hun a'r dystiolaeth sydd gennych, ac yna symudwn at gwestiynau.

**Alun Davies:** Thank you for your attendance this morning. As I have told others, I am pleased that you have accepted our invitation, and I also thank you for the written evidence that you have submitted—we appreciate that. I am aware that you have already given evidence in the past during other discussions which took place before the Assembly elections in May. I ask you to introduce yourselves and the evidence that you have, and we will then move to questions.

[161] **Mr Salmon:** We also welcome the opportunity to give evidence today, although, as you probably know, I intimidated that it was not the most convenient time given the number of meetings that are taking place. However, we may as well commit and we will try to compete with the Young Farmers' Club. We are happy to introduce, and bring along with us, a member of the YFC, whom we consider to be an important part of the stakeholder group.

[162] My name is Julian Salmon, and I am director of Country Land and Business Association Wales and I am also a farmer in east Wales. I used to keep suckler cows but I do not any more—not for reasons of TB, although I have had TB on my farm in the past. I introduce Paddy Rooney, who is on the TB action group, and who also has a family farm in Carmarthenshire where he keeps cattle. I believe that Rhydian is also a cattle farmer, but he can speak for himself.

[163] I do not wish to repeat what has gone before; much evidence has been given and there is nothing in there with which we would disagree, and I do not believe in repetition for the sake of it. Therefore, if you will forgive us, please ask us questions but I will not repeat much of what has been said. As the CLA, we regard the approach to TB so far as being one that lacks comprehension. We feel that the failing of the ISG report, which Paddy will talk about, is that it is not a comprehensive report in the sense that it is a compromise by virtue of the terms and conditions under which it was set up; there were preconditions that extensive culling was not an option, which therefore compromised the evidence in the report. Paddy will enlarge on that.

[164] We also feel that, in dealing with TB, there is a raft of international evidence from people who have successfully done it, and are still doing so. We are not proud enough to feel that we cannot learn from those experiences. There is no need to reinvent, create or look for science when the evidence is already there. So, that is where we will come from in talking about where we see the way forward in relation to what the TB action group has done already.

[165] There is now an opportunity for Rhydian to introduce himself and say what he wants to say, and then we will happily elucidate on our policies.



[166] **Mr Rees:** Diolch am y gwahoddiad i gael dod yma heddiw ar ran y Clwb Ffermwyr Ifanc; yr wyf yn ymddiheuro na chawsom y cyfle i roi tystiolaeth ysgrifenedig i chi.

**Mr Rees:** Thank you for the opportunity for coming here today on behalf of the Young Farmers' Club; I apologise that we have not had an opportunity to provide you with written evidence.

[167] **Alun Davies:** Bydd cyfle i chi wneud hynny—dim ond i chi beidio â'i ganu. [*Chwerthin.*]

**Alun Davies:** You will have an opportunity to do so—just do not sing it. [*Laughter.*]

[168] **Mr Rees:** Byddwn yn cyflwyno tystiolaeth ysgrifenedig maes o law.

**Mr Rees:** We will present written evidence in due course.

[169] The members of the club have been very busy recently, as you know. We have held many activities throughout the week of the show, so unfortunately we have been unable to provide a written report to you, but you will receive it in the coming weeks. A few of the members have been discussing their views on the ISG report with which I would represent them today. We feel that the report did not offer much practical solutions towards the culling of badgers. Although it said that badgers were infected with TB, it failed to say that culling would be of any benefit. So, we feel that the culling of infected badgers should be put in place as soon as possible to cut this disease.

[170] We have a member on the TB action group, and I asked for his opinion on the ISG report. He said that he had not read it, and that the action group has not met for a long time, so I feel that you should continue with the action group in some sort of way. We would be very happy to have a member on that action group. Pete Smith, a dairy farmer from Pembrokeshire, is our representative, and he has given quite valuable points to your action group, as have other members. We feel that the Assembly has not implemented those actions, so it would be worth taking on those recommendations.

11.30 a.m.

[171] We strongly believe in culling badgers in the intensely infected areas to reduce TB infection. To avoid stress on farming families, it needs to be eradicated, and I am glad that you are talking about eradication rather than controlling it. However, as I say, we will provide you with more information and a full written report in the coming weeks.

[172] **Alun Davies:** Paddy, dywedodd Rhydian eich bod chi'n aelod o grŵp gweithredu TB; pryd gyfarfuoch chi ddiwethaf fel grŵp?

**Alun Davies:** Paddy, Rhydian said that you are a member of the TB action group; when did you last meet as a group?

[173] **Mr Rooney:** The last meeting was in March. It was six weeks before the election. [*Interruption.*]

[174] **Alun Davies:** Sorry, I was just picking up on something that was said. Please, carry on.

[175] **Mr Rooney:** Yn Saesneg?

**Mr Rooney:** In English?

[176] **Alun Davies:** Yn Saesneg—fy mamiaith i.

**Alun Davies:** In English—my mother tongue.

[177] **Mr Rooney:** Perhaps I might preface my remarks by saying that I was brought up as a scientist; it was not in this discipline, but scientific principles hold, whatever the discipline. One of the things that I was taught was that, in designing an experiment to try to address an issue or a problem, you may not like the results, but you accept them. I find it deeply shocking that responsible scientists should have been prepared to undertake a research study having been told at the outset that there is a conclusion that they are not allowed to reach. I find that utterly disgraceful. Sadly, the particular issue of badgers has tended to dominate discussion of the ISG report, distracting attention from other points that it makes that are well worth noting. I will pick out some of the points worth noting.

[178] Previous speakers made the point about the skin test. Figures on page 104, I think, indicate that the skin test is not always very reliable, and that it misses a significant proportion—perhaps even one in six cattle testing clear that subsequently prove to have been infected. Even if it is half that number, it is far too many, because they remain in the herd, not being isolated in any way, and potentially spreading infection. So, the point made in the ISG report that you need a more rigorous testing regime is something that I would endorse. It is a pain in the neck, and anybody who has attended a herd test will know what a bloody nuisance the damn thing is, but the combination of gamma interferon testing and the skin test has a great deal in its favour, however much of a nuisance it is.

[179] To digress slightly from that first point, we do not have suitable laboratory testing facilities in Wales. The point has been raised several times before. We have discussed putting something in Carmarthen. I also raised, in the TB action group, the possibility of a mobile test laboratory, in a caravan. It would not be terribly expensive, it could go to areas where outbreaks had happened and would be very much quicker than shipping blood samples halfway across the country to get them tested. I think that it should be costed. My own figure is that the capital cost would be under £40,000—but that needs to be checked—and it would need two technicians. However, I think that the benefits from it could be very considerable.

[180] Returning to other points from the ISG report, it supports increased testing frequency. While we have this present epidemic raging we must accept increased testing frequency. As Nick or Steve mentioned earlier, the cost-benefit analysis presented is very skewed and needs to be cross-checked. To exploit my age slightly, being by far the oldest person in the room, I suspect, I can say that before the badger protection regulations came into force, badgers were regarded as just another farm pest. They undermine fences, they dig setts and holes that are a danger to young stock—I have had a young animal breaking its leg by falling into a sett—they scuff up decent pasture, and in one way or another they are a bit of a damn nuisance. As a routine, at marginal cost, if they became too much of a problem we would snare or trap them and bump them off. It was a regular routine process and it contributed, I believe, to the ultimate control of TB many years ago, when TB was not eradicated but virtually eliminated in the country. It did not cost anything, because one did it while one was going around. As a lad I can remember going out and setting snares in a badger sett and it was a bit of fun. Perhaps it was cruel but it was a damn sight less cruel than watching a cow die of TB. I think that one has to do the first things first.

[181] Therefore, the cost-benefit figures in the ISG report need to be challenged but that should not distract us from the constructive points that are made in it. We should not lose sight of the points that have been made about testing, test frequencies, and the testing regime generally.

[182] As far as the TB action group is concerned, I think that most of the points have been made. In my more bitter moments I see its approach to the wildlife issue as having been a most impressive exercise in creative prevarication. The excuses for not doing anything have been most imaginative. Against that, its work on the badger-found-dead survey produced some persuasive, convincing information, and setting up the biosecurity intensive treatment

area took a long time to get off the mark but once it got going—and I would pay tribute particularly here to Mark Alexander, who has been the project officer in charge of this—has been very constructive.

11.40 a.m.

[183] In the context of biosecurity, the scoring tool that it has developed to evaluate biosecurity practices at farm level, priorities for improvements and so forth, is absolutely invaluable. I would like to see it much more widely used. I have discussed with the president of the Royal Veterinary College how it ought to be built into animal veterinary training and farm degree courses as a routine, because it is an example of how to set up good, useful practice, not just for TB, but for transmissible animal diseases generally. I would put that as a feather in the cap of the TB action group; it has done a useful job in that context.

[184] On the wildlife front, bluntly, it has been pathetic. In the context of wildlife, we should not lose sight of the fact that there is more to wildlife than badgers. In France, wild boar are the major vector and we know that wild boar have now started their spread westward in Britain, as far as the Forest of Dean, having moved from Oxfordshire in a matter of months. The Wye might be in the way, but there are bridges, and wild boar are as capable of using bridges as anything else, so I do not think that it will not be that long before they find their way into Wales somewhere along the border. They are, potentially, as big a threat as badgers. So, there is more to wildlife than badgers and we should not forget it.

[185] The final comment that I will offer is that I am disappointed that the ISG, with which I raised the issue, and, so far, the TB action group, have not followed up, developed or exploited the work that has been done by the University of Warwick on polymerase chain reaction testing—a technique that allows you to identify the presence of particular bacteria in soil. It has established that *M. bovis* has a long persistence, of months or more, in some circumstances, and the possibility of infected pasture and setts is significant, but we do not know how significant, because we have not done the tests. I urge you, please, to take on board the thought that we could use PCR testing as a precautionary measure and as an informative measure much more extensively than we are doing at the moment. When I raised this with the TB action group, the response was, ‘Well, there is an exercise going on with the VLA and Warwick university’. So what? Why the hell should we not do something here? As far as the TB action group is concerned, ‘action’ has largely been a misnomer, and I would like to see much more.

[186] **Alun Davies:** Thank you for that. It is a well-known tradition that you get rid of a problem in the title of a group.

[187] **Mr Salmon:** Can I—

[188] **Alun Davies:** I would rather that we carry on with questions. I am interested in one of the points that you made as you came towards the end of your remarks, Paddy, because we have heard this morning from both the farmers’ unions, both of which have emphasised the importance of natural barriers in preventing the spread of TB through different populations. You seemed to be saying in one of your remarks about wild boars that they would cross the Wye using the Severn bridge or whatever. You seem to be saying that there are no natural barriers, and, to take that a step further, that the only way to eradicate TB in cattle is to take on a wildlife culling policy, particularly of badgers. You seem to be saying that there can be no limits to that.

[189] **Mr Rooney:** I will make two points. The importance of cattle-to-cattle transmission should not be underestimated: it is crucial. Intelligent, sensible and practical biosecurity measures are essential. So, killing badgers is one element of a broad-spectrum approach that

is needed.

[190] Natural barriers certainly exist, and rivers, mountain ranges and so on can constitute barriers to movement. You have to look at the way in which badgers, or badger ecology, operate. They tend to live in relatively local areas. If they are disturbed, they will move. There are always young badgers that will roam outside the family territory, but disturbance does not help. Natural barriers are relevant, and it is possible to find some locations—Ynys Môn is a case in point—from which badgers would have a great problem escaping. My recollection—and I am going back many years now, but this is also from conversations that I have had with retired veterinary surgeons, farmers, and so on—is that what contributed to bringing the badger problem under some measure of control was effectively a country-wide practice among farmers of keeping a particular pest under control. That may be politically incorrect and it may be an uncomfortable thought, but that is how it used to work. It reinforces the point that Rosie Woodroffe made in her presentation to the ISG and her general contribution to its work, namely that you need persistent and regular control—not just every two years or so—on the wildlife front and it needs to be widespread.

[191] **Alun Davies:** If I may paraphrase what you said, in conclusion, you are saying that we need a two-speed approach, whereby we have intensive culling in TB hot spots, and then a country-wide, almost laissez-faire policy of allowing farmers to manage, for lack of a better term, badgers on their lands as they would in the old days. I would say that you want to create a legal structure that would enable farmers to do that.

[192] **Mr Rooney:** I think that is fair. It relates to the badger population. Nature's way of controlling overpopulation is to introduce disease, and we are seeing pretty widespread TB in the badger population now. When the badgers became too much of a nuisance on our farms—I am referring to Herefordshire, but it applies elsewhere—one did something about it. They can be a real nuisance, not just on the disease front, but in terms of general, practical farming.

[193] **Mr Salmon:** We are talking about TB in cattle and wildlife, but we must not forget that we are talking about a disease—a zoonosis—that is transmittable to humans, and I would guess that the removal of TB is considered with that in mind. To go back to my opening remarks, we feel that what we lack at the moment is a comprehensive strategy that has been well-proven on numerous occasions overseas, in places such as New Zealand, Ireland, Australia, South Africa, in terms of the defence of wildlife, and North America, in terms of the defence of whitetail deer in Michigan. A library of practical evidence is available, which has been produced using all these latest scientific techniques. There is no silver bullet, but where people have been successful, they have used a combination of all the tools in the armoury intelligently, and that includes controlling the disease among wildlife and other populations. We have quoted an eminent epidemiological professor in our evidence who states that, if you do not control TB in wildlife and domestic animals, you are virtually wasting your time. It is a long haul; there is no short fix. If we have decided that we have to control TB, and we must remember, as others have said, that this is an EU policy of eradication, I presume that that is the legal route that we have to now pursue. I heard the Chief Veterinary Officer for England referring to it as a control policy. You might say that control is the first step to eradication, but the EU policy is to eradicate, and I believe that the EU has set a 6 per cent threshold for TB-free status. The latest figure for the UK gives us an infection rate of 5.64 per cent, but I suspect that those figures are massaged in some way, and it is not very far from 5.64 per cent to 6 per cent.

11.50 a.m.

[194] Mary alluded to a visit from the Food and Veterinary Office. What happens if the FVO does not like what it sees and it questions the status, maybe, of our TB-free zone? What happens to the industry then if we lose European Union TB-free status? This is a serious

disease, which potentially infects humans. In other parts of the world, in the Hispanic parts of the Americas, there is a rising incidence in the human population. Veterinarians, cattle people and people who have had any cattle have to handle cattle and are, I presume, exposed to this risk. So, unless we have a comprehensive strategy, we are, frankly, wasting our time, and that is what is so frustrating. You do not have to be a scientist—and we are not claiming to have scientific insight—but if you were to put the papers before GCSE students and say to them, ‘Here is the international evidence and information, what would you do?’, I do not think that they would come up with what we are doing now.

[195] **Brynle Williams:** Bearing in mind that the ISG report was prepared for DEFRA, the findings will be taken into consideration elsewhere, not just here in Wales. What recommendations do you think that we should be taking on board from this report?

[196] **Mr Salmon:** Paddy referred to things such as gamma interferon and you alluded to what is happening in Northern Ireland. As they can now be genotyped—the spoligotypes, which are the strains of the bacterium—the Northern Irish are linking them to the cattle database. That seems to me an intelligent use of data and I agree that we should take that on board. I think that it was Mike Walsh in Northern Ireland who did it. In southern Ireland, it has been found that for cleaning out hot spots in atypical and contiguous herds, the use of gamma interferon with skin tests will clean out the latent infection. It is an expensive process, not only in terms of cost, but also in terms of the emotional and financial impact on the farmer, because it takes out a lot more cattle than would normally happen with a skin test. If you want to get on top of the disease, it is a useful tool. However, you will not get the industry accepting such useful tools if we are not adopting a comprehensive approach; that is, the wildlife is unaffected. It is not just in badgers, as Paddy said; it is in wild boar and deer—among muntjac deer it is up to 5 per cent in some areas. It is very variable, but it is out there. As long as these reservoirs exist, we can throw as much money as we like at this, but unless we use all these tools in targeted approaches, it will not work.

[197] **Mick Bates:** Thank you very much for your evidence. There were some interesting views on the TB action group. I do not know whether Paddy is familiar with the acronym ‘NIMTO’, but politics is very often driven by NIMTO—‘not in my term of office’. That is just one for you in the future, Paddy. [*Laughter.*]

[198] You have heard me ask about perturbation before, and I am keenly interested in how you would have improved the trials and the design of the trials to mitigate against perturbation. Would you like to outline better ways of conducting a trial, which would overcome this problem of perturbation?

[199] **Mr Salmon:** Hard boundaries, which Paddy alluded to before—although there may be some crossing of bridges—are proven to be important. New Zealand has based its culling strategies, mainly of possums, on using hard boundaries to control the wildlife. I guess that you can get as hard a boundary as you like and then maybe use other methods where there is a weakness in controlling it. Also, we have been told that gassing is a more thorough method of removing setts, and I suspect that a lot of the perturbation is to do with trapping, which is not 100 per cent effective. It will be quite difficult to avoid that, and the other issue with perturbation is that you probably have to extend the area and keep doing it—you have to keep taking out the infected animals.

[200] **Mick Bates:** I tended, before listening to your evidence, Paddy, to agree with you about these geographic areas, but you glibly said that the animals can cross bridges. So, how robust is this reasoning that geographic boundaries can control the spread of TB?

[201] **Mr Rooney:** I do not think that there is any doubt that physical boundaries of various kinds, railway lines, for example, can be a deterrent to movement. It discourages an animal

from going a certain way and might make it go some other way. So, if one can identify any more or less confined areas, a particular regime within those areas could then be operated. There will always be animals that get out and, just to digress again, when the idea of a biosecurity intensive treatment area first came up, the chairman of the Wales TB action group, Tamsin, argued that this was a cattle-to-cattle measure. That is nonsense, and eventually we persuaded her that biosecurity applies to everything—it applies to wildlife, people, you and me, cars, you name it.

[202] So in defining the area in which one is going to operate a particular regime, one has to look at the possibility of using natural barriers insofar as one can, but at the same time recognise that they are not going to be absolute. Some animals are pretty persistent, and if they want to get out, they will. Rosie Woodroffe did not actually say it in so many words, but the clear implication of what she was saying is that confined areas of control—let us call them that—are not a complete answer. I think that one has to face up to the possibility of extensive control, which may go beyond the immediate and obvious local barriers. There is scope for common sense in this, and I fear that that has not been applied too often in the TB situation. If you have natural barriers, and you can locate a fairly extensive area within those natural barriers, then by all means start within that territory. If you then find that there is transmission beyond that area, and selective sampling of setts—for example, PCR testing of pastures and setts—would give you an indication of whether the disease is being spread by some means or other, then you would probably have to think again. However, I would prioritise it, and see whether we can identify fairly large areas—not local areas on a Krebs trial basis, but larger areas—and evaluate how one gets on within those, and then perhaps move on and combine the evaluation process with routine testing of setts or pastures outside, around the fringes. Then I think you would get some indication of what is happening.

[203] **Mick Bates:** I was interested in your comparison with other studies around the world, and the international basis. Could you tell me whether that is the kind of basis that was used for eradication? Did other countries use hard boundaries to eradicate the disease?

[204] **Mr Salmon:** Certainly the New Zealanders did, and they still do. They are now carrying out trials with vaccines in possums, and they use hard boundaries—mountain ranges, rivers, and any other physical boundaries that suit.

[205] **Mick Bates:** The ISG seemed to dismiss the Irish trials and did not use, as far as I am aware, any international evidence to back up anything that it found in its study. Do you have any suggestion as to why it ignored all of that?

[206] **Mr Salmon:** I do not, other than perhaps that scientists are rather proud individuals and do not like to be upstaged or to admit that somebody knows more than they do. That is just a remark off the top of my head. I cannot understand why—I am not a scientist, but, objectively, if I was asked to go and find out about TB, I would go to the library or the internet. There are pages of information about what is going on all over the world. I think that I would start there. You do not all have to agree, but you might at least pay some respect to those who succeed.

[207] **Mick Bates:** If I might continue on gamma interferon, Chair, previously, we seemed to have an idea that, where the disease spreads to an area outside, let us say, a hard boundary, then gamma interferon testing might be a useful tool to find out if the disease is present. Are there other circumstances in which you would consider gamma interferon testing a useful control mechanism?

[208] **Mr Rooney:** I am not sure that I quite followed that, Mick.

[209] **Mick Bates:** I am having trouble concentrating too, with this music in the

background. I love pop music so much. [*Laughter.*]

[210] We heard earlier, when I asked about the use of gamma interferon testing, that it was useful in areas where the disease had been absent, because if it appears, you can identify it. Are there any other places where you would suggest that gamma interferon testing would be useful?

12.00 p.m.

[211] **Mr Salmon:** It helps where there are hot spots. The Americans use it, certainly in Michigan, for testing that is atypical—that is, where TB is present in a herd but people cannot understand why. Gamma interferon will then pick up the latent infection. It has been used successfully with contiguous herds in cases where there is a need for more extreme identification. Where there is a negative skin test but a positive gamma interferon test, the Irish found that that beast was eight times more likely to test positive at the next 60-day test. It is quite an extreme measure, but if you are serious about controlling the disease, you would not ignore it in your armoury.

[212] **Mr Rooney:** That is a very good point about the gamma interferon test. It has had some negative publicity, and there have been claims of high numbers of false positives and so on. There is a serious selling job to be done with the farming industry on gamma interferon tests. There are two things to point out here. First, its sensitivity is much higher than the skin test. Secondly, it picks up infection very much earlier than the skin test. In that context, it may well pick up an infected animal that never becomes a shedder, and which never develops the disease. That is a risk that we have to take. However, in more than 96 per cent of the cases, the so-called ‘false positives’ were not false positives at all; they were genuine positives, which were at a phase of the development of the disease when it was not detectable in any other way. The virtue of the test is that it nips the development of the disease in the bud, at the risk of identifying an animal once in a while that never goes on to develop the shedding phase of the disease. However, that is around 4 per cent, maybe.

[213] Most of my neighbours, for example, are very unhappy about it indeed, because they see their herds being totally wiped out for testing positive. There is a serious educational job to be done with the farming industry—and Dai knows my views on this, as does Nick—to explain to people why you get an apparent false positive and do something about it when it is not necessarily a false positive at all. However, at the moment, there is a hell of a barrier to overcome with a great many farmers, who have been very worried about how the test has gone through. They need to be reassured, and it needs to be explained much more carefully than it has been so far. It is fine for a scientist to say, ‘This gives you such and such a result’, but if you are a farmer who sees his herd as being at risk, you have a different problem.

[214] **Mr Salmon:** If you want the industry to buy in to any programme—and we are ready to do it—we have to be convinced that the authorities are there to help us, and that they will also help to bear the cost, because this will not be cheap. You should not be under the illusion that this is a cheap fix. In our response, I quoted some of the international evidence from those who have done this. It is a long haul, and if there is any fallibility or weakness, you will fail. Once you have started, you have to be determined to go on until you get the result you want, otherwise you are wasting time and effort. The industry would come with you if it could be confident that this was being addressed comprehensively for the benefit of wildlife and domestic animals in the long term. However, if you just cherry-pick the bits that you think you can knock off easily, I am afraid that you will not get us on board.

[215] **Mr Rees:** The report also mentioned zoning different areas of Wales. Our members would be totally against that. It would make it difficult for us to market animals throughout the country. That would be a serious disadvantage to farmers in Wales. I understand that you

are going to visit other countries to see what they have done.

[216] **Alun Davies:** We are visiting Ireland.

[217] **Mr Salmon:** North and south?

[218] **Alun Davies:** We are visiting Dublin.

[219] **Mr Rooney:** What about New Zealand?

[220] **Alun Davies:** If someone were to recommend that, I would be more than happy to take them up on it.

[221] **Mr Salmon:** I would be happy to recommend it to you. The Minister has already gone, and I have agreed to supply her with some contact addresses of professors in New Zealand whom she ought to talk to while she is there.

[222] **Alun Davies:** I am sure that that is at the top of her agenda.

[223] Diolch yn fawr iawn i bawb am fynychu'r cyfarfod y bore yma, a diolch i bawb ohonoch sydd wedi rhoi tystiolaeth. Fel y dywedais, yr wyf yn awyddus i sicrhau bod yr ymchwiliad hwn yn digwydd yn gyflym ond yn drylwyr. Byddwn yn cyfarfod yng Nghaerfyrddin ar ddechrau mis Medi. Bydd yr amserlen, y dyddiad a'r lleoliad ar wefan y Cynulliad, felly cadwch lygad arni. Byddwn yn cynnal sesiwn agored arall ar ddechrau mis Medi. Byddwn hefyd yn cynnal sesiynau eraill yn y Cynulliad wrth i dymor yr hydref fynd yn ei flaen. Fodd bynnag, yr ydym eisiau cyhoeddi ein hadroddiad erbyn dechrau mis Tachwedd.

Thank you very much to everyone for attending the meeting this morning, and I thank everyone who has given evidence. As I have already said, I am keen to ensure that this inquiry is conducted swiftly but thoroughly. Our next meeting will be in Carmarthen at the start of September. The timetable, date and location will be on the Assembly's website, so keep an eye on that. We will be holding another open session at the start of September. We will also hold further sessions in the Assembly during the autumn term. However, we wish to publish our report by the beginning of November.

[224] You look as though you are desperately trying to say one last thing, Mr Rooney.

[225] **Mr Rooney:** Yes, I have one last point that I hope you will enjoy: I think that the Assembly's rejection of the table compensation proposal is one of the best things it has ever done. That was absolutely first rate—stick with it. It is a grotesque system and is thoroughly inequitable. There are provisions in the existing rules for you to challenge any compensation figure that you think is wrong, so use those rather than some ham-fisted tick box.

[226] **Alun Davies:** I will take that message to the Minister in New Zealand. [*Laughter.*]

[227] **Mr Salmon:** I also want to say thank you very much for allowing us to give evidence. This really is a chance for the Assembly to lead the way, and we would support you all the way in that, if you do what we all recommend. Thank you very much.

[228] **Alun Davies:** Diolch yn fawr.

*Daeth y cyfarfod i ben am 12.06 p.m.  
The meeting ended at 12.06 p.m.*