

# DÁIL ÉIREANN

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## AN COMHCHOISTE UM THALMHAÍOCHT, BIA AGUS MUIR

## JOINT COMMITTEE ON AGRICULTURE, FOOD AND THE MARINE

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*Dé Máirt, 26 Feabhra 2019*

*Tuesday, 26 February 2019*

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The Joint Committee met at 3.30 p.m.

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### MEMBERS PRESENT:

Deputy Jackie Cahill,	Senator Rose Conway-Walsh,
Deputy Martin Kenny,	Senator Paul Daly,
Deputy Charlie McConalogue,	Senator Tim Lombard,
Deputy Willie Penrose,	Senator Michelle Mulherin.
Deputy Thomas Pringle,	

In attendance: Deputies Eugene Murphy and Carol Nolan and Senator Gerry Horkan.

DEPUTY PAT DEERING IN THE CHAIR.

*The joint committee met in private session until 4.10 p.m.*

### **Scrutiny of EU Legislative Proposals**

**Chairman:** Schedule A is COM (2019) 48, proposal for a regulation of the European Parliament and of the Council amending Regulation (EU) No. 508/2014 as regards certain rules relating to the European Maritime and Fisheries Fund by reason of the withdrawal of the United Kingdom from the Union, and COM (2019) 49, proposal for a regulation of the European Parliament and of the Council amending Regulation (EU) No. 2017/2403 as regards fishing authorisations for European Union fishing vessels in United Kingdom waters and fishing operations of United Kingdom fishing vessels in Union waters. It is proposed that there are no subsidiarity concerns in respect of COM (2019) 48. It is also proposed that this proposal warrants further scrutiny. Is that agreed? Agreed.

It is proposed that COM (2019) 49 warrants further scrutiny. Is that agreed? Agreed. It is proposed to do this by way of inviting the relevant officials to appear before the committee next week, if possible. Is that agreed? Agreed.

Schedule B is COM (2019) 837, proposal for a Council decision on the position to be taken on behalf of the European Union within the working group on wine, set up by the economic partnership agreement between the European Union and Japan, as regards the forms to be used for certificates for the import of wine products originating in Japan into the European Union and the modalities concerning the self-certification. It is proposed that the proposal listed in Schedule B warrants no further scrutiny. Is that agreed? Agreed.

### **TB Eradication Programme: Discussion**

**Chairman:** I welcome Professor Simon More here for the first session today. He is the director at the UCD centre for veterinary epidemiology and risk analysis.

Before we begin, I draw the attention of Professor More to the fact that witnesses are protected by absolute privilege in respect of the evidence they give to the committee. However, if they are directed by the committee to cease giving evidence on a particular matter and they continue to do so, they are entitled thereafter only to qualified privilege in respect of their evidence. They are directed that only evidence connected with the subject matter of these proceedings is to be given. They are asked to respect the parliamentary practice to the effect that, where possible, they should not criticise or make charges against any person or entity by name or in such a way as to make him or her identifiable.

Members are reminded of the long-standing parliamentary practice to the effect that they should not comment on, criticise or make charges against a person outside the House or an official, either by name or in such a way as to make him or her identifiable.

I invite Professor More to make his opening statement. He has already submitted quite a

lengthy statement and I ask him to summarise as much as possible. Once he has concluded his statement members will ask questions.

**Professor Simon More:** I assure the Chairman that I will summarise the statement that I have provided.

I am the director of the UCD centre for veterinary epidemiology and risk analysis. Our work is entirely to provide the science to support policy decision-making both by the Department of Agriculture, Food and the Marine and Animal Health Ireland in the area of animal health and welfare, as well as public health. The centre is fully funded by the Department and is located in the veterinary school at University College Dublin. I also chair the scientific committee of the European Food Safety Authority, where we do similar work in providing the science to support policy decision-making by the Commission.

I will glean key components from my presentation. The programme is very much informed by ongoing research. Our focus has been on two questions as to what the constraints to eradication are and what the practical solutions are to address those constraints. We focus on the three areas of cattle, wildlife and the overall programme, including seeking to glean lessons from international experience.

On page 3 of the statement provided, there is a graph that compares the situation in Ireland with the four countries of the UK. The green line shows there has been an ongoing fall in the incidence of TB in this country over time but certainly not to the point of eradication.

On page 4, one can see the fundamental question that I want to address today, which is whether we are doing enough to successfully eradicate TB from Ireland by 2030. I am sure members will remember that 2030 is the target year that was set by the Department.

Prior to the recent introduction of badger vaccination, it is my view, which is one that is widely shared, that we did not have the tools to eradicate TB. It was very much a control programme that focused on how we could ensure TB remains at low levels while identifying and addressing the constraints to eradication. Essentially, we did not have a full toolbox of what was required.

Badger vaccination is now in place and with ongoing roll-out, it certainly is an important addition. It is my view, however, and there is very robust evidence to support this, that even with all current strategies plus the new badger vaccination programme, it will not be sufficient for us to achieve the eradication of TB by 2030. There are three reasons for me to make this statement. First, ongoing national research has identified a number of issues that are of ongoing concern. Some of these are technical and some are not. The non-technical ones include programme fatigue, the commercial realities of trying to keep commerce going while we seek to eradicate, as well as limited industry engagement.

The second piece of evidence comes from international experience. Australia, New Zealand, Ireland and the UK have had long-term TB eradication programmes, mainly in the presence of wildlife. Other countries have had problems but these four countries have really serious problems and two of them have made substantial progress. The last known case of TB to exist in Australia was in 2002 and that was in buffalo, and before that TB was found in cattle in 2000. New Zealand is also making very substantial progress and I am more than happy to talk about that in greater detail. Lessons learned from those two countries suggest that there are fundamental differences between key components of the programme here versus those countries that

were successful and they particularly relate to cattle controls and industry engagement.

The third piece of evidence comes from work that has recently finished. We have been working closely with Wageningen University in the Netherlands. That work was undertaken to assess and answer the question of whether we can eradicate given current controls plus badger vaccination. Central to this work is a concept with which members may not be familiar but which is important in terms of the argument that I want to put forward. I refer to the concept of the reproduction ratio. In terms of the way that diseases work, the reproduction ratio is the number of secondary cases for every primary, which means there is a threshold. In other words, if we can get the reproduction ratio or “R” to be less than one then we can move towards eradication but if “R” is more than one then we cannot do so. Therefore, for the threshold “R” must equal one. The work that is being done, as part of that study, looks solely at current controls without badger vaccination and it would suggest that as “R” sits between 1.07 and 1.16, essentially we are not eradicating. When we add badger vaccination, we tip below the threshold but only just. The estimate that we have got is “R” equals 0.93 to 0.97 or just below the threshold for eradication, and that is all current controls plus badger vaccination. If we continued with the current controls plus badger vaccination, the fact that “R” is just below 1 means we are looking at an eradication time of between 60 and 90 years. A couple of things suggest that the figure of just below 1 is a little bit optimistic. First, it is based on national averages and we know that some parts of the country will be higher than others, which would mean we would not eradicate it in some parts while it would be easier in others. As we shift from culling to vaccination we will, by default, end up with more badgers and a higher density of badgers makes it more challenging for a vaccine to work.

We are at a critical decision point, which was not the case one year ago, five years ago or ten years ago on account of the fact that badger vaccination was not on the table. If we are genuinely interested in eradicating TB very quickly, say by 2030, we need to think hard about the scope and intensity of control measures. This is important in terms of both time and the cumulative costs.

On page 8 of my presentation, figure 2 relates to a different programme, the programme for bovine viral diarrhoea, BVD, but the message is the same. It shows the number of persistently infected, PI, animals at different points in time. In 2013 the BVD eradication programme started and if there had been no PI retention at all, we would have followed the green line and we would have had no BVD in the country now. However, we followed the yellow line between 2013 and 2016 and, as members will see, it never gets to zero. If that had continued, we would never have eradicated the disease. We are mirroring the purple line. There were issues of PR retention between 2013 and 2016 but it has progressively been addressed, though there were an extra three or four years of costs in the process of eradication.

I want to focus on the additional measures we should consider. I am re-presenting the science from research done by our group and by many other groups and it is my view that there are three fundamental areas on which we need to focus. One is to adequately address TB risk from wildlife and the badger vaccination programme is fundamental to this. Most of the work involved in this is monitoring as we need to ensure it works. If it does not work, we need to know why. These are all active areas of research.

I am aware that deer are an important concern for this committee. It is important to understand the epidemiological role of deer. They get infected but we need to know if they get infected as a spillover host from infected cattle and badgers or if they are a maintenance host, where the disease self sustains in deer populations. Most worrying, we need to know if they are

a maintenance host with a spill back to cattle, like badgers. I have given examples from various programmes. In some countries, deer act as a maintenance host, such as Spain. The most interesting example, however, comes from Michigan, where white-tailed deer are a maintenance host for TB, although it was a man-made problem. They acted as a spillover host, picking up the infection from cattle, but hunters in that state were leaving large dumps of silage and hay over winter to keep the deer numbers up to facilitate hunting in the spring. This artificially increased the numbers and encouraged aggregation, which is why deer are now more than a spillover host in Michigan.

Data are sparse in Ireland. The epidemiological role played by wild deer, particularly sika and sika crosses, is uncertain but we have some evidence. The first piece of evidence is the expansion of the area, though we do not know about density and I understand work is currently being done on that. In most parts of the country the percentage of infected deer is actually very low, though the numbers are much higher in Wicklow. My assessment, which is shared by all the scientists with whom I work, is that in most parts of Ireland there is no evidence to support the view that deer are a maintenance host. In Wicklow it is different and in the hotspots in that county we do not know whether they are or are not a maintenance host. Higher TB prevalence has been observed but this does not provide conclusive evidence that TB is self sustaining in local deer populations, nor of the relative contribution compared to cattle and badgers, if it is self sustaining.

My paper presents my thoughts on this matter. I have spoken about this in great detail with a colleague in Michigan and with colleagues here. There are possibilities going forward but it is not easy. In Michigan the methodologies are not directly translatable. In areas of concern such as Wicklow, it is important that deer are managed so that they do not end up as a maintenance host. Density and aggregation are things to look at in this context. When deer are removed, it is important that their scientific value is maximised so that we can understand their role in this.

A new methodology has come on the scene in the past few years, known as whole genome sequencing, which seeks to understand what the genome is. There is now an opportunity for us to understand the direction of spread. Cattle and deer are infected but is it that cattle infect deer or the other way around? Whole genome sequencing offers us that opportunity and that work is just starting here in the Republic.

The second important area is additional risk-based cattle controls, which the committee discussed in December. In countries such as Ireland, it is not possible with the current technology to guarantee its herd is free. A risk-based approach is used internationally so we identify a herd as low-risk or high risk. Herds can be at risk for up to ten years but it depends on the risk factors that are involved. There are two main drivers for this persistent risk, one is infection in the locality and the second is infection in the herd. I wish to focus on the latter in particular, which is due to residual infection that is present in animals but not detected using current tests. There are several studies showing that this is a significant problem. Work that we have done, and work from Cambridge, based on modelling studies, would suggest that between 10% and 25% of herds at release still have infected animals present. That was based on Great Britain, GB, data.

We have not done similar work here but what we have done has shown that herds definitely are at increasing risk for an extended period. We have been able to disentangle, not completely but to some extent, that residual infection is a very important part of that. We have done work recently to create a picture of the level of movement of cattle in Ireland as part of ongoing commerce. The data are instructive, indicating for example, that there were 1.3 million movements,

or movement events in 2016. This refers to trailers, not animals, a trailer could have one animal, ten or 100, and the distance travelled by those vehicles was enormous but that is beside the point. There is ongoing “churn” or recycling of infection where we are not clearing all infection from herds at the point of derestriction. We have substantial movement of cattle. There are two issues connected with the fact that herds are being released and there are still infected cattle, one technical and one legislative. Technically, we do not have the tools that will provide us with 100% guarantees of freedom. Human doctors do not either. Second, as the committee is aware, under the relevant legislation in the EU, Council Directive No. 64/432, as soon as herds have had two clear tests they are free to trade. That is not sufficient to mitigate risk. By comparison with my home country, Australia, for herds to move from point of derestriction after infection takes eight years. Here it takes four months. That is a huge difference. How do we reconcile that with ongoing commerce? The only methodology available internationally to cope with the problem of residual infection and ongoing movement on the one hand, and on the other, ongoing commerce, which has to keep going, is the concept of a risk-based approach. That is that herds move progressively from high risk to low risk with the opportunity over time for us to gain increasing confidence that they are free and that happens while there is ongoing testing. The problem is that while we are doing that, we have to be careful not to put other herds at risk. The approach that has been proposed and which I have spoken about for years, and I appreciate it was discussed in December, is the concept of the high-risk herds being treated very intensely to reduce risk and the concept of risk-based trading. That is a process of allowing trade as much as possible while minimising the potential for high-risk herds to transfer infection to low. That approach was the centrepiece of the Australian programme. That is important because the whole country was under risk-based trading. In New Zealand it is also a key component but there are very few infected herds there. The process is that farmers of a particular risk sell cattle to herds of equivalent or higher risk and source from herds of equivalent or lower risk.

It is fair to say in summary that TB is widely considered a Government problem in Ireland. That is in fundamental contrast to international examples of success. The UK struggles with very similar problems as ours but the problem is a lot worse there. Australia and New Zealand, however, are the only other two countries in a similar situation and they have been very successful. The story there of industry engagement was fundamentally different. Industry representatives and government have been very involved in genuine and regular, open and honest engagement and building a trusting environment where real issues can be addressed together. In New Zealand, I note the programme is run by a non-government organisation. As part of that industry engagement, which involves joint decision-making, cost-sharing has been a key component. In my submission I highlight several models of cost-sharing that have been used and I highlight the TB stakeholder forum, a very important initiative here, seeking in part to make a bridge to genuine industry engagement. I also highlight Animal Health Ireland, which seeks to do that in an Irish context.

**Chairman:** I thank Professor More for a very informative presentation. Deputy Cahill will speak first.

**Deputy Jackie Cahill:** I thank Professor More for a very detailed presentation. He has studied TB eradication in this country in great depth. We want to be sure we do not eradicate the farmer while we are trying to cure the problem. On the cost-sharing between Government and industry, farmers have been paying for TB testing for several years. It is not an insignificant cost at farm level. When farmers agreed to pay for the test, the breakdown was 50:50 with the Government - I am open to correction on that. Before we agreed to pay for testing, there was a levy paid on all animals but we abandoned paying that and moved to paying for the tests.

The professor spoke about residual infection. Is he questioning the testing undertaken here and its failure to find all reactors or is it impossible to have a test that can identify residual infection? If the test is leaving residual infection that is a serious indictment of the testing regime. Would the Professor expand a bit on that? Is there a test that is better at identifying residual infection?

Professor More mentioned the lack of information about deer. There are figures which show that TB was present in up to 16% of cattle in some parts of Wicklow. The reality is that farmers in some parts of Wicklow have stopped keeping bovines because they could not escape the disease.

There is an inconsistency in what Professor More have said. In most areas of Ireland there is no evidence to support the contention that deer act as a maintenance host for TB. I cannot understand why deer in Wicklow are treated differently to deer in Tipperary or elsewhere. In Tipperary, my county, there have been a few very bad outbreaks of TB over the past three years. A large proportion of them have occurred adjacent to forestry. I am most definitely convinced that deer are playing a part in this. Whether cattle are infecting deer or deer are infecting cattle does not matter, in my opinion. Deer are playing a part in the spread of the disease; they can pick it up from cattle and they have the ability to spread the disease over vast distances. While the professor made reference to cattle movements, deer travel large distances across the countryside and any farmer near forestry who experiences trouble with TB will not be convinced that there is no link.

There was a focus on bovine viral diarrhoea, BVD, and the failure to take out permanently infected, PI, animals. It was suggested that such an approach was bordering on criminal, and I agree with that. However, there was a lack of legislation when we started testing for BVD. Keeping PIs in place should not have been tolerated. Farmers are now counting the costs of that. We were told that the programme would last for three years, and that if we partook in a voluntary year at the beginning we would only have to tolerate it for two years. It has now been in place for six or seven years, and there is no end in sight. It is adding a cost to every calf that is born, and the farmer is carrying that cost.

The focus of the presentation we heard was that we need greater risk-based cattle control. That sent a shiver up my spine. The Department will be putting extra controls on cattle movements, which undoubtedly will put extra costs on the system. Again, the farmer will carry the can for that. Departmental officials appeared before this committee on a previous occasion. Professor More stated in his presentation that herds are at risk for ten years after a TB outbreak, and that the risk factor for those herds persists. If that is the case, and a black mark is going to be placed against a herd that has had TB in the last ten years, there will be a huge impact on cattle trading. Whether it is a calf, a weanling or a store, there will be a screen up in the mart stating that the herd the cow came from had cases of TB in the last six months or two years or whatever it is. That will practically discriminate against herds and put some farmers at a huge financial disadvantage. If that is the weapon we are going to try to use to eradicate TB, it will cause huge financial hardship and I cannot see how any farmer could agree to allow a system like that to operate.

Returning to the first point I made, on residual infection, the Professor is an expert and I do not doubt his expertise for a minute. I have heard him speak in many different forums over the years but if farmers are doing a test with which we are not happy, as it is leaving reactors after it, we are not dealing with the hub of the issue. Professor More is an expert. He spoke about how Australia managed to eradicate TB, and given how much wildlife there is in that country,

that was a very significant achievement. Did Australia operate the skin and blood test, as we do here, or had it an additional weapon in its armoury which helped it? Putting in extra controls for up to ten years on cattle movement and placing black marks against different herds does not seem practical to me. Brucellosis was not mentioned in the presentation. We eradicated that disease by very extensive testing using accurate tests. I was a farm leader before coming into this House and remember strongly defending at a meeting at parliament the idea that post-movement testing be kept in place for another three years. I said that it was essential, even though there were others at the table who did not agree. Brucellosis was finally eradicated. We were in that place a couple of years earlier, so we relaxed the testing regime and ended up back at square one. We were confident, with brucellosis, that we had an accurate test and that were making progress. It was eradicated and we have even got to the stage where we have stopped testing for it in our herds now. It was a major achievement. If we had a test that left an element of residual infection afterwards, the idea that it might eradicate a disease baffles me. The ten-year restriction on herds is not practical, in my view.

**Deputy Willie Penrose:** I thank Professor More for his very illuminating and learned paper. A few months ago, in 2018, veterinary officials made their presentation, and I suggested that we would be talking about this in 2040 and 2045. I was wrong; I will be long dead, as will many others. We will still be going about this issue in 2060. The professor might be familiar with the River Shannon. People spoke about draining that river back in the 1950s, coincidentally at the same time the TB eradication programme commenced. There is a better chance of the Shannon being drained than TB being eradicated. We have already spent the guts of €8 billion on this, and the Department indicated recently it would take another billion euro. The Department is wrong. Britain leaving the EU is going to cost €12 billion. We will far exceed that sum by the time this scheme is completed. The reason is obvious. The professor has identified it very clearly. Other people have skirted around the issue but he did not. The programme in place was merely a containment programme. It was never supposed to eliminate the disease. This vindicates a view I heard back in the 1970s, when I was at college. The programme was never going to rid the system of TB. On the vaccination of badgers, the Department of Agriculture, Food and the Marine must run off and get permission from the National Parks and Wildlife Service to vaccinate a certain number of them. There is no widespread vaccination of badgers; it is very controlled. Am I correct about that? I thought I heard evidence from the Department on the last occasion that it could only carry out so many such vaccinations with the approval of the National Parks and Wildlife Service. That attempt to deal with the disease went down the drain.

Deputy Cahill is correct. The vaccine programme produced false positives and false negatives. There were also residual cases where TB is not detected in the herd at all. There is no chance this programme will eradicate it. There was a better chance of winning the EuroMillions last week. Ordinary people are looking at this and wondering why we are spending so much money. Deputy Cahill has said that it has cost the farmers a great deal of money, but a great deal of State money has been spent on this as well.

Can the professor tell us how Australia eradicated bovine TB? The professor is from Australia, where there was last an outbreak in 2002. It has a different system, but it also has very large amount of animals, along with possible vectors, carriers and hosts. Are we sure that the potential carriers are the cattle themselves, along with badgers and deer? Is that the extent of the potential carriers in our system, or is there something hidden that we perhaps do not know about? I know about the concept of the reproduction ratio - I studied it once - but with the number of secondary cases, even with the vaccination, the ratio is barely below one. I do not know where this will end. If I went to college again, I would become a vet as vets will be in demand



forever, not just for border control but for everything else.

**Chairman:** We will want barristers too.

**Deputy Willie Penrose:** I do not think so. They are so poorly paid now that I would rather be a vet. It is a source of concern. It has been said we must tighten up risk-based management and two clear skin tests are not sufficient, and that we are a victim of legislation because it is not tight enough. Anything that comes from Europe is usually strangling legislation so I am very worried to hear Professor More say that. Will he explain this risk-based approach system? Is it a system where those in the higher risk category sell from one to the other and do those with lower risks sell to each other? What way does that work? It would be interesting to get it operating in Ireland and it would certainly represent a challenge.

We are trying to extrapolate from an international context the role of deer as a reservoir host with spill-back to cattle. Those who have been involved in this for a while are wondering how something that is fairly virulent in Wicklow does not apply in Tipperary, Westmeath or wherever. Is the witness advocating that the only way to tackle this is to go straight in with a scheme or system modelled on the compulsory national BVD eradication programme? Could a parallel be drawn with that which could produce an earlier result, so that I could see this eradicated before I die rather than when I am well gone? This has only vindicated my layman's view as ten Parliaments will have been gone through discussing it, leaving historians to evaluate the effectiveness.

**Deputy Martin Kenny:** I thank Professor More for this document, which as others have said is very detailed. It goes to the core of the problem. I was looking up a few things up and I noticed a delegation from Animal Health New Zealand visited Ireland and Britain in 2008 to speak about how successful New Zealand had been in this area and the measures that could be taken. The paper mentions the possum that was the main spreader of tuberculosis in New Zealand in particular, and a vaccination programme seemed to work very well. The same vaccination programme had been tested in Ireland and found to be successful. Has that been licensed and will it be used here or have we developed something different?

There is the possibility of using a vaccine, particularly for badgers. As Deputy Penrose said, it seems we have to get over hurdles as they are a somewhat protected species. It is a different animal and a different country or environment so how successful could it be in reality if we are to trap and vaccinate the numbers of badgers that would make a difference? It would have to be done in other parts of the country at the same time and over a sustained period. Has a study been done on the costs involved in trying to get that to happen?

Around my area we have much forestry and many deer. When I was doing my research, I noted that the first time a badger was found to be infected with TB in Ireland was in 1974 and it took 20 years of study to determine that badgers were spreading the disease. We are now looking at deer and in some cases it is and in some cases it is not. It seems inconclusive. I hope we will not have to wait 20 years to come to a conclusion in that respect.

In different parts of the country there seems to be different strains of TB. If there are different strains, would it be one of the reasons this disease could be carried more by certain wildlife in some areas than others? What research has been done into this? The accuracy of testing, which has been mentioned, has always bothered me and many farmers around the country. The TB test could be positive but when the affected animal goes to the factory, there may be no lesions and the reading is found to have been a false positive. Nevertheless, the farmer's land

is placed on lock-up, as it were, and he or she cannot sell animals or anything else. Professor More seemed to indicate that in many cases there are cases where a positive result is not indicated despite the presence of TB. In the countries where there were successful eradication programmes, is there a different or better method of testing? Is there a more conclusive test?

There was mention of movement of cattle and two clear tests. If there are two clear tests, a farmer may move cattle and begin to trade again. The witness has pointed out the possibility of false positives as a danger and that there should be a longer period involved. How much longer would that period be? There was mention of ten years, which is more than the lifetime of most of the animals. There must be something within reason so what kind of period would work? The risk to trade and movement is interesting as there are some closed farm systems with bovine fare that are kept, finished and sent to the factory but they cannot leave the farm. It is something I know that concerns farmers who are neighbours of those farms. Wildlife does not know what is a closed system and it will cross these farms. There are issues and we would like to get to the bottom of how suitable such systems are if we are serious about eradicating TB. Deputy Penrose alluded to this but there are many people in the farming community who do not believe we are serious about eradicating TB in the country. At this stage, we have had generations of people in the TB eradication industry. Large amounts of money are being paid in what was a containment policy up to now that was sold as being an eradication policy.

There was mention of Australia and New Zealand as success stories. What level of success can be seen in other European countries? I know Britain has major problems but other parts of Europe may have a similar climate and a similar type of wildlife problem, so how successful have those countries been in eradicating the disease?

**Professor Simon More:** I hope I will be able to answer every question but if I do not, please let me know. I thank Deputy Cahill for his questions. I preface my responses to all these questions in terms of what I see my role as. It is not just my role but it is the role of scientists, and we are trying to give our best understanding of the position. I suggest my role is much easier than my policy colleagues, as that is what members of the committee would do. We are just trying to clarify the facts. I want to be very clear that I am not trying to suggest that the situation is hopeless. Based on all the evidence I have put together and much work by much people, if we are to realistically shift towards eradication, we need to do much more. We must be very focused for all the reasons I outlined.

To reply to Deputies Cahill and Kenny on the accuracy of the test, the tests being used here are really no different from those being used elsewhere. The tools we use here are the tools available. It is important to remember that the gamma test was invented in Australia at the very end of that country's programme but it never really used it. However, it has been very helpful to us subsequently. These are imperfect tests. I will give an example, which I gave recently in a Johne's disease implementation group, IG, because we have the same problem there with tests, mainly of men. If we get a prostate test done, we know that when we come out of that the result may be negative but that does not mean that we definitely do not have . It could be early. There could be many reasons. There are also big problems of false positives with the blood test used for prostate. We are using these imperfect tests and TB is no different. Mention was made previously of false positives and false negatives. There are not many false positives but there are these false negatives. Fundamentally, what we are trying to do is find a way forward despite the imperfect tests. That is why, for example, we know that the skin test does not pick all of the infection, and it is not very good at early infection. The gamma test was introduced because it is much better at doing that, although it throws up false positives.

To be honest, the problem we face with TB is no different from most animal health or indeed human health issues where we are trying to do the best we can with tests that are imperfect. That is the reason different countries have used this concept of risk-based trading, and I will come back to Deputy Penrose's issue in a moment, to provide some more detail. Are there better tests or better weapons? The answer is "No". I do not believe we will get a better diagnostic test. There is none that I am aware of on the horizon. No test will ever be 100% effective. It would be very rare for a test to be that effective. We are, therefore, trying to use the other models to help us.

Deputy Cahill spoke about the model of cost sharing and the fact that farmers pay 50%. I do not dispute that. What concerns me is that the methodology of cost sharing we use here creates resentment inasmuch as farmers, quite reasonably, do not want to pay that and they have no real say in where this programme is going. The percentage is important, and I have given some detail on that in the paper. If I could use the New Zealand story as an example where an agreement was made about the percentage that would be covered. There would be an envelope around all of the programme costs and industry will pay, say, 50%. It is a little bit more; I think it is 56%. It does not really matter. However, in terms of every decision made, 50% of the input comes from farmers. If they have a good year and the costs go down, the cost to farmers goes down too. If they seriously need to ramp things up, the cost to farmers goes up. Farmers are absolutely central to the entire process of decision making. They know it is within their grasp that they can eradicate so they are willing to do that, whereas here it is fair to say there is no connect. It is a point of huge resentment but farmers have no say. It does not matter whether things are good, bad or indifferent, they will be charged the same amount. That is the issue.

In terms of the question as to why deer in Wicklow are different, I am not sure I can answer that. We work with biological systems and it is not always entirely clear. However, based on international experience, we know that as we aggregate species and get increasing contact between deer and between deer and infected species and as we increase densities, those things are drivers for shifting from a spillover to a maintenance host. We are working on first principles. The fact that 16% are infected does not necessarily mean that they are driving the problem. We do not know if that is the case.

Deputy Kenny noted that it took 20 years to clarify the role of badgers in TB. The way it worked was that infection was found in badgers but that means absolutely nothing until we clarify the role badgers are playing. Two large and very fine studies were done in the past 20 years, from the late 1980s. In east Offaly and then the four-area project, badgers were removed from swathes of the country. Essentially, they were comparing cattle plus badgers versus cattle only and they found that the level of TB fell significantly in areas of cattle only, indicating that the only explanation was that badgers were very much driving the problem.

With deer it is more difficult. While it may be possible to remove all deer, it would be hugely resource intensive to do so. We have an opportunity to use a completely different methodology now that has only emerged in the past couple of years, namely, whole genome sequencing. That helps us to understand directionality and while it has only just been introduced, this methodology will help us. I do not know whether it will help us to clarify quickly the epidemiological role of deer. Ireland could benefit from discussion with colleagues in the United States in particular, who have sought to clarify the role of deer in their cities. One of the beauties of science is that we work internationally all the time so we know those folks. They were very helpful to me in developing this paper.

On the issue of extra controls, the sole context in which I am saying this is based on lessons

from the bovine viral diarrhoea, BVD, story on the graph. It is important for us to be realistic. It would be wrong of me to say that what we are doing is fine when I do not believe that is the case. It is absolutely fine for control. However, in terms of eradicating the disease, to reply to Deputy Penrose, we are close to a ratio of one post the badger vaccination. That is over the whole of the country and not just defined areas. The aim is to vaccinate over the whole of the country. This modelling is based on a coverage of 40%, so 40% of badgers would be immune at any point in time. If we could drive that coverage higher, that would drive this value lower. However, we thought 40% was probably realistic given that badgers are being born all the time and they need to be vaccinated, etc.

Regarding brucellosis, I appreciate Deputy Cahill's comment that the test was much more accurate. We had another great tool whereby if we got the brucellosis diagnosis wrong, we found out very quickly. We do not have that with TB. It could sit there. I was involved in the final cases of TB in Australia and it was at that point that we could disentangle everything that was happening. Currently in Ireland, everything is happening simultaneously and it is very difficult to disentangle what is going on. However, in Australia, with the very final cases it was possible to show the importance of residual infection. One of the final cases was what we call in Australia a clearance sale, which is a farm shutting down. They distributed to 40 farms over two states and one could trace all of those cattle. One could not do that here because there is so much happening in terms of TB.

Deputy Penrose asked if it is possible to eradicate TB. There are international examples of success. The story in Australia, New Zealand, the UK and other European countries, which I will come to in a moment, is that it is all different. The problems in Australia were mainly with respect to cattle control. They had two wildlife species that worried them. One was feral buffalo, which were a maintenance host. However, feral buffalo lived in a different area from feral cattle. Nonetheless, they eradicated TB from feral buffalo by eradicating feral buffalo.

The other one was feral pigs. There are 26 million feral pigs in Australia, a little more than the number of people, and TB was being found in feral pigs, which are just like wild boar here. They quickly realised that feral pigs were eating infected cattle carcasses. However, once those carcasses were dealt with under the programme, there was no maintenance of infection in feral pigs. If there had been such maintenance, I do not think TB would have been eradicated. In New Zealand, it is completely different. It has almost eradicated TB from cattle but large areas of the country have very high population densities of brush-tailed possums, a feral Australian species. Authorities in New Zealand are moving from trying to eradicate TB in cattle to trying to eradicate it in possums.

Deputy Martin Kenny asked about the experience in various European countries. I appreciate the examples, which are important. TB is re-emerging in Spain, France and Germany having been present at very low levels. It is becoming increasingly problematic in Spain and particularly in France and is also beginning to re-emerge in the Alps in the very south of Germany. It is primarily present in badgers and possibly deer in France, in deer in Germany, and in wild boar and various species of deer in Spain, although I suspect there is also cattle involvement in the latter country. I know from our Spanish colleagues that the issue of cattle controls has become increasingly important there.

Deputy Martin Kenny's question on closed systems highlights a very reasonable concern, namely, whether a risk is posed to, for example, large feedlots from neighbouring herds. A study by one of my colleagues, Mr. Jamie Madden, who is present in the Visitors Gallery, is beginning to address that issue. That highlights that we work very closely with our policy

colleagues to provide the science to help support policy decision making. This issue has been identified as a concern and we will now seek to determine whether a risk is posed.

The Deputy asked for how long restrictions should be in place. Ten years sounds like a long period for restrictions. I am not sure I have a direct answer to the question. The fundamental problem is that we need to be able to cope with trade while also coping with TB eradication. Under risk-based trading as employed in Australia, it took eight years to get from the point of de-restriction to when a herd could be freely traded. In the interim period, the cattle could be traded with many different herds, but that had to be very carefully done. However, it might not be an appropriate system for Ireland.

Deputy Penrose asked how risk-based trading works. In Australia, there were two layers of risk-based trading. One layer was a state-based system. It only took a few years to eradicate TB from the south of Australia. Tasmania had a risk status, then Victoria, then South Australia and so on. There was an area-based status. One could not sell cattle from a herd in a high-risk state to a farmer in a less risky state. There was state-based direction of movement. There was also movement within states. If one had been released from restriction four years previously and was, therefore, medium risk, one could buy from herds of equivalent or lower risk and sell to herds of equivalent or higher risk. That was to ensure that any trade in stock did not set back the programme.

**Chairman:** How did that affect farm sustainability from a commercial point of view?

**Professor Simon More:** That is a very important question. I have asked my Australian colleagues that specific question but have not yet received an answer. I will forward it to the committee when I receive it. I am a farmer's son. The risk-based trading system became something with which people lived. I acknowledge that it has caused significant concern in Ireland. I am well aware of and understand those concerns. From a technical point of view - which is from where I am coming - we do not have a better solution, given all of the constraints I mentioned. However, I will revert to the committee on that issue once it becomes clear.

**Chairman:** I would appreciate that.

**Deputy Martin Kenny:** Do different TB strains make a difference?

**Professor Simon More:** I would probably need my colleagues with greater expertise to address that question. However, to the best of my knowledge - I will check this and revert to the committee - we do not have much strain-typing information in Ireland. The situation in the UK, where there has been very fine strain-typing information, is very different. That said, until recently the methodology available for strain-typing was rudimentary and that is where genome sequencing has come in. Ireland is not far behind the curve. We have some very fine scientists who will drive that agenda forward, strongly supported by policy colleagues. My understanding is that wildlife is not more susceptible to certain strains of TB, but I will clarify that for the committee.

**Deputy Charlie McConalogue:** I thank Professor More for his very interesting and insightful presentation. Under the pre-movement test which is being proposed at European level for adoption, including in Ireland, if a herd is six months out of test, it must have a pre-movement test within 30 days of movement. Is there any scientific basis for that being of assistance to the eradication programme? Would it be productive in any way or make an impact?

Overall, Professor More is saying is that the introduction of a risk-based movement system

made the difference in Australia and New Zealand and that it is absolutely essential if we are to get close to eradication here.

On deer, the Professor mentioned that TB is re-emerging in some European countries and he referred to deer in that regard. Is there conclusive evidence of deer infecting cattle with TB in any country? He indicated that the intensity of the deer presence may be of consequence and referred to fodder being shared. In those instances, was there proof of TB transfer or just suspicion? If there is such proof, I ask him to elaborate on the mechanisms by which TB is transferable from deer to cattle.

**Professor Simon More:** On pre-movement testing, we carried out a study approximately 12 years ago which specifically investigated whether it would be useful in Ireland. It was a little akin to a cost-benefit analysis because there is a significant amount of effort involved in pre-movement testing. We looked at whether it would be of assistance in picking up more breakdowns. Our view at the time was that pre-movement testing would only be useful if implemented in a very targeted way, essentially focusing on high-risk herds. That was the conclusion of our study. I wish to make two broader points. In terms of first principles, of course, it would be useful for animals moving from a high-risk herd to be tested at appropriate times. Six months is probably an appropriate timeframe because it takes time for the infection to develop and return a positive test result.

I would like to digress slightly, if I may. I have concerns that in Ireland we make a lot of animal-based decisions. When we have an infected herd, we are essentially saying that if we do certain things, this group of animals is safe but that another group is not so safe. I would have concerns that we are really stretching the ability of our tests to do that. If we were to move to a risk-based situation, it is much safer to work at herd level and to say that all of the animals in the herd are of equivalent status whereas pre-movement testing looks at the individual animals. Let us say an animal is infected. The probability for picking up infection with a skin test is, on average, 50% but it will generally be higher later in the course and much less if it earlier in the course. Everything helps but the fundamental question is whether we are doing enough.

On whether there are any other options apart from risk-based systems, to be honest, based on all of the evidence that I have, I cannot see how we can eradicate the disease within a reasonable timeframe without a really robust risk-based system, which would probably need to include trading, unless we get a better test. On deer, the question was asked as to whether there is evidence anywhere of infection drifting from deer to cattle. I spoke at length about this with my colleague from Michigan, Dr. Dan O'Brien, who has been extremely helpful. He works for the wildlife department there and has been very involved in its TB eradication programme. I asked the same question of him. The authorities there are very confident that white-tailed deer in Michigan are a maintenance host which spill back to cattle. They found evidence of TB in deer populations where there could not have been cattle involvement. I do not think we would ever get that here in Ireland because deer and cattle coexist. Our best hope is probably whole genome sequencing although the organism that causes TB is problematic. In terms of whole genome sequencing, if an organism is passed from A to B, for example, the organism mutates as it shifts across. If I know the direction of mutation, I will know it has moved in that direction. Most organisms change quite frequently but the organism that causes TB might only change once every two years according to experts at UCD, Professor Stephen Gordon and Mr. Joe Crispell, who are leading this work. That makes the work very difficult but nonetheless, as I have highlighted in my paper, there is work from New Zealand and just published work from the USA that would suggest that we are starting to get evidence about directionality that will

help us.

Deputies asked how the disease is transferred. It can probably be transferred in lots of different ways but the way that is most likely is through the sharing of aerosols. In order for the organism to establish infection most effectively, it must be what is called a droplet nuclei, which is the way it is presented when an animal or person breathes out. If an animal breathes out and if it has the infectious material, when a nearby animal breathes in, the infection is in a form that allows it to go all the way down to the lowest parts of the lung. My expert colleagues believe that one might only need ten organisms to establish infection if it is presented that way whereas one might need 10,000 or 100,000 organisms for it to establish by way of ingestion. It is really an issue of risk. It is my understanding, based on best principles because we do not know everything about TB, that sharing pasture and other close contact, particularly when there is an opportunity to share aerosols, is probably the most effective way for the disease to spread. We certainly cannot say, including for badgers, that sharing pasture or cattle grazing near a latrine is not possible but it is probably an issue of how frequently it occurs, the dose of the organism that is present and so on.

**Chairman:** I thank Professor More for that. Are there any more questions?

**Deputy Eugene Murphy:** Is there any evidence to show that there is a great risk to cattle grazing close to forestry? In my county, there have been a number of TB outbreaks over the years, all of which seemed to involve cattle that were close to forested areas. Given that forestry is going to be such a major part of our economy going forward, should we be more cognisant of this?

**Professor Simon More:** I thank the Deputy for the question. To my knowledge, there has been no work done on that matter but perhaps there should be. Over the years, questions have been asked as to whether disturbances, including road-building or the cutting down of forestry, creates risks. Often, people find that such disturbances occur alongside or shortly before breakdowns. That is a different issue to the one referred to in the Deputy's question and based on empirical evidence, we do not know the answer. However, based on first principles, if forestry encourages deer to increase in density and increases the opportunity for aggregation with infected species, then that would of course be an area of potential concern in terms of shifting from this spillover to maintenance host. However, we have no empirical evidence-----

**Chairman:** On that point, if one looks at the map of the country one will see that a number of black spots, in Wicklow in particular, are quite close to areas of forestry-----

**Professor Simon More:** I guess the problem-----

**Chairman:** The point I am making is that forests provide a lot of cover for wildlife, including deer and badgers.

**Professor Simon More:** I completely accept that but the problem, from a scientific point of view, is that there are bound to be areas of the country where there is plenty of forests and no TB problems. It is really an issue of comparison. There is forestry in a lot of different places but whether the risk is greater in all of those areas or only in areas with very large amounts of forestry is a question that has not been asked as yet.

**Deputy Eugene Murphy:** It is a question that should be asked.

**Professor Simon More:** I will pass it to my policy colleagues.

**Deputy Eugene Murphy:** I know of one case where there was quite an amount of disturbance in a forested area a few years ago and, after that, three or four nearby farms were affected by TB outbreaks. The outbreaks occurred between six and nine months after the disturbance. One could assume that the wildlife was pushed out of the forest when the works were going on. Again, it is just something on which I would like clarification. If there is any further information available on this question, I would appreciate it.

**Chairman:** Deputy McConalogue is next.

**Deputy Charlie McConalogue:** I seek a brief clarification from Professor More. He mentioned that a study in Michigan found that TB was escalating in deer in an area where there were no bovines and that the infection could not be related to bovines. That shows that they were transmitting it among themselves. Can we say with certainty that they also have the same capacity to transmit it to bovines?

**Professor Simon More:** That is a good question. I will need to revert with clarification, but I will offer my best understanding. I believe it was first identified in deer in the 1970s, and it quickly became clear that it was in populations. It was not necessarily at high levels - my understanding is that TB in white-tailed deer has never been at a high level - but there was no explanation other than it being self-sustaining in deer. Once that was clear, the questions changed. If we know that it is self-sustaining in deer, we can investigate whether there is evidence to support the view that a farm being close to deer is risky. If that is the case, it provides some evidence of spill-back to cattle. To be sure, though, I would like to seek clarification from our Michigan colleagues and revert through the clerk.

I will make a further point that might be useful. It is a story that relates to the issue of industry engagement. The Australian programme started in the 1970s and made rapid progress from the south heading north. It got to the Kimberleys, country where not all of the cattle can be found. In the north west, it is difficult country to muster. The programme was run by what were called the "Canberra bureaucrats". The scientists and bureaucrats in Canberra decided that, from that point forward, they would have to start depopulating properties. The property owners in the north were incensed, and quite reasonably so. The whole programme stopped. For six months, there was no action at all. Eventually, the federal agriculture Minister stepped in and said that, from that point forward, producers - farmers - in the industry would be involved and the decision-making board would comprise 50% farmers and 50% bureaucrats. The latter were concerned and wondered whether the farmers would make the hard decisions. A key turning point for Australia was when the Minister said that, from then on, if the board comprised 50% farmers, 50% of the costs would be shared by them as well, a subject that Deputy Cahill mentioned. That was not the case previously.

What happened was interesting. The programme fundamentally changed, becoming much more ruthless. The farmers realised it was their money. While they were much more compassionate towards their own, they realised that, if they were to rid the country of TB, they could not only make easy decisions. They had to make the hard ones as well. The same happened in New Zealand. From that point forward, it became a genuine partnership between industry and the Government. It was a fundamental turning point in 1984. They eventually eradicated TB in cattle and buffalo in 2002.

This is not just a question of risk-based trading. Rather, it is about the whole package. We need to sit everyone down, collectively pay and collectively make decisions, which has not been the case to date.



**Chairman:** In Professor More's opinion, is Ireland being TB free by 2030 achievable or pie in the sky?

**Professor Simon More:** It is a huge ask. If we put everything in place that I am suggesting, we would get close. The problem is that the tail will always be long. I have corresponded with many people prior to this meeting to try to understand different perspectives. My Australian colleague felt it was important to say how draconian Australia got. It concerned the tail as opposed to the point Ireland is at now. We are not at the tail, but we are getting close. For example, if Deputy Kenny's farm has a breakdown close to the tail, we will not muck around with tests. We know he has TB on his farm. We depopulate immediately. We could lock his farm up for ten years, but the risk is there until every single animal that was present at the breakdown is dead. The programme got more draconian the closer we got to the tail. I am not saying that Ireland is there yet, but that is what we would need to do to reach a 2030 deadline. We would be close rather than at it.

**Chairman:** Deputy Penrose might have been right.

**Deputy Willie Penrose:** A blind man and a deaf man would know that.

**Chairman:** I thank Professor More for his presentation, which was interesting and informative. This is a discussion that we will probably have again. As he knows, we discussed this matter before Christmas, and some of his colleagues will address us shortly.

**Professor Simon More:** I have four points on which I will revert to the committee.

**Chairman:** We would appreciate that when Professor More gets an opportunity.

*Sitting suspended at 5.37 p.m. and resumed at 5.38 p.m.*

**Chairman:** From Veterinary Ireland, I welcome Mr. Finbarr Murphy, chief executive, Mr. Conor Geraghty, food animal representative and vice president, Mr. Donal Lynch from its food animal group and a past president, and Mr. Gerry Neary, also from its food animal group and a past president. I thank them for attending to discuss issues concerning bovine TB.

Before we begin, I bring to the attention of the witnesses the fact that they are protected by absolute privilege in respect of the evidence they give to the committee. However, if they are directed by the committee to cease giving evidence on a particular matter and they continue to do so, they are entitled thereafter only to qualified privilege in respect of their evidence. They are directed that only evidence connected with the subject matter of these proceedings is to be given. They are asked to respect the parliamentary practice to the effect that, where possible, they should not criticise or make charges against any person or entity by name or in such a way as to make him or her identifiable.

Members are reminded of the long-standing parliamentary practice to the effect that they should not comment on, criticise or make charges against a person outside the Houses or an official either by name or in such a way as to make him or her identifiable.

I understand that Mr. Murphy will make the opening statement. I invite him to proceed when he is ready.

**Mr. Finbarr Murphy:** I thank the committee for the opportunity to meet it. Private veterinary practitioners, PVPs, play a central role in Ireland's agrifood sector, our largest indigenous industry. Veterinary practitioners are the gatekeepers of animal health and welfare in Ireland.

There are approximately 1,000 food animal veterinary practitioners providing services to the agrifood industry countrywide. They do so under four key pillars: provision of services to animals in need of veterinary care; on-farm risk assessments and advisory services; animal welfare; and public health.

Every farmer has a relationship with a vet established over time and documented in the ER1 form. A recent survey by Animal Health Ireland shows that 93% of farmers are very satisfied with the scientific advice and recommendations given to them by PVPs.

Vets are renowned as problem-solvers in the variety of on-farm situations that can occur. PVPs have a proven track record in their ability to communicate with farmers, whether it involves passing on difficult messages or transferring knowledge. The relationship between a farmer and his or her vet is based on a long-standing trust built over many interactions, both formal and informal. The vet is in a unique position to understand farm management systems and local relationships, geographical and personal, that can have an impact on disease management success. Livestock farmers value this resource which is available locally in every parish in Ireland.

Vets play a central role in veterinary public health and food safety. Healthy animals provide quality safe food. The vets' role in maintaining herd health on their clients' farms ensures Ireland's place as a leading exporter of high-quality safe food. Vets are also the gatekeepers and stewards of antibiotic usage on farms and continue the drive towards relative reduction in use through herd health programmes, disease prevention advice, vaccination and knowledge transfer. The 200% increase in vaccination use over the past decade, combined with a static usage of antimicrobials despite an expanding animal population, is an indicator of vets' role in disease prevention measures on farms resulting in better public health outcomes.

PVPs are a fundamental part of operating the eradication programme on Irish farms. TB is a zoonotic disease capable of being transmitted from animals to humans, either directly or as a foodborne disease. Members of many families in Ireland have historically suffered from TB, commonly known as consumption. Thankfully, TB in humans in Ireland is now a relatively rare occurrence thanks to the major reduction in TB in cattle, among other measures. In addition to the human health benefits of controlling TB in cattle, an eradication programme is also essential to facilitate trade.

Veterinary Ireland is a committed stakeholder on the TB stakeholder forum which is currently having discussions on disease control policy options to eradicate bovine TB by 2030. Achieving officially brucellosis free status in 2009 was a major milestone and demonstrates what can be achieved when all stakeholders work together using sound scientific principles. The veterinary profession facilitated this process through implementation of the animal health computer system, AHCS, on the ground in 2004. Each herd test delivers an on-farm audit of bovine animal traceability. This auditing service is provided to the Department of Agriculture, Food and the Marine by PVPs without financial support. The AHCS allows real-time tracing of high-risk animals, preventing further disease outbreaks in destination herds. In addition, vets provide disease management and biosecurity advice to farmers on a regular basis. This reduces the likelihood of disease outbreaks, including TB.

Approximately 600 members of the veterinary profession are employed on a part-time basis by the Department of Agriculture, Food and the Marine to provide meat inspection services to the agrifood industry, ensuring our meat can be exported to markets all over the world. These temporary veterinary inspectors also provide surveillance for the TB programme and

Beef HealthCheck. Our members look forward to working with all stakeholders to continue the progress towards TB eradication and initiatives to achieve this goal in a timely manner.

Veterinary Ireland would like to take the opportunity to thank the joint committee for its interest in the significant changes made by the Veterinary Council of Ireland to the code of professional conduct for veterinary practitioners in December 2017 and the implications of these changes for the practice of veterinary medicine. Veterinary Ireland highlighted its concerns on this issue in its submission to the joint committee dated 25 January 2018. The effect of the changes made unilaterally by the outgoing Veterinary Council of Ireland was to effectively deregulate the ownership of veterinary practice and by extension the practice of veterinary medicine. Veterinary Ireland would welcome the support of the joint committee in ensuring that we maintain the current high standards of veterinary practice and that lay corporate interests are not allowed to undermine this proven system for the delivery of veterinary services to farmers and the public.

This system has stood the test of time and is well regarded. At present, veterinary practitioners provide a 24-7, 365-day-a-year service to all parts of Ireland. Current practice is community-based, with an ongoing empathy with clients and their animals. This service is provided by vets who are part of the fabric of the community. Lay corporate ownership and control of veterinary practice would have profound implications for the future provision of veterinary services in Ireland. These would include monopolisation by corporate bodies leading to a narrowing of competition, increased fees and a reduction in credit terms to the public, as well as insufficient out-of-hours cover in rural areas and significantly increased fees for provision of these services. Vets employed by corporate bodies will be constrained to use only the drugs and services of vertically integrated corporate groups that own pharmaceutical companies, laboratories, referral hospitals and crematoria. This can compromise vets' professional discretion. Vets will be required to work to protocols established by corporate bodies to maximise returns. Investigation and treatment regimes will be dictated by management to maximise profit. This can compromise ethical standards.

The veterinary profession in Ireland has a largely unblemished record in the provision of a first-class veterinary service to the Irish public. It also underpins a world-renowned agrifood export industry worth more than €13 billion annually, based on high standards of animal health, welfare and food safety. This successful formula should not be endangered by the radical changes that will come about should lay corporate ownership and control of veterinary practice be permitted.

**Deputy Jackie Cahill:** I thank Mr. Murphy for his presentation. We have had a very detailed discussion on TB. I do not have much else to say on the matter. I see that there is a control programme for Johne's disease. I have serious concerns about this control programme. I refer to the tests we talked about earlier and the practice of leaving reactor animals on farms. I have no confidence in our current test for Johne's disease. I accept that putting a code of practice in place at farm level can greatly reduce the level of the disease. In order to control the number of animals affected, however, we had better gauge the level present in a herd. The test does not stand up to scrutiny at all. I refer also to the number of false positive results. The accuracy of the testing for Johne's disease is a serious issue. We have to get serious about reducing the level. I accept that the code of practice at farm level can improve the situation.

The ownership of veterinary practices is a subject we have covered on a number of occasions here. It has been 12 months since we discussed it. I would like the witnesses' views the current situation regarding corporate ownership. Have practices been bought by corporate entities? I

fully agree with the bullet points Mr. Murphy has outlined. Corporate ownership definitely will not improve services in the less viable areas. There will definitely be cherry-picking of the most profitable practices. Where does this stand at the moment? At the time, many questions were asked at this committee about whether it is legally possible for veterinary practices to go into corporate ownership. How has this progressed? Does Veterinary Ireland have comments or suggestions on what could be done? The topic that jumps out from Mr. Murphy's presentation is corporate ownership. We have discussed this at length on three or four occasions and I would like an update on it.

Animal Health Ireland has definitely provided a forum for focusing on different diseases. I am repeating myself, but the BVD eradication programme definitely left farmers with a sour taste due to the time it is taking to get rid of a disease whose elimination should have been fairly straightforward. I accept that the soft options taken have definitely added to the length of this eradication. If we are going to get serious about diseases, we cannot allow reactor animals to stay on farms when they are clearly identified. That practice was absolutely ridiculous. The point on somatic cell count is well made. We have made huge progress on it.

The other thing I would like to raise is the use of intramammary antibiotics on farms. There is a lot of talk of severely restricting this in the future. I would like our guests' views. Is our animal health sufficiently advanced where mastitis is concerned that we can afford to reduce use of intramammary antibiotics or even eliminate it? Would that have a spillover effect on somatic cell count? It has been a tool that farmers have used for generations at this stage and it has worked extremely well. There is definitely a consumer reaction to the use of antibiotics at farm level. What would be the impact of restricting usage of intramammary antibiotics on dairy farms?

**Deputy Martin Kenny:** I thank Mr. Murphy for his presentation. I wish to ask about the TB eradication programme. The questions are somewhat similar but from a slightly different perspective, given that the witnesses are very much the foot soldiers on the ground in regard to TB eradication. One issue concerns the average length of time for a reactor to be removed from a farm, which is about four weeks. That seems to be quite a long time. I would welcome the views of the witnesses in respect of that.

What is their view on vaccinations? Do they believe the vaccination of wildlife will work? How will it work? Is it a doable or sensible programme that can be applied in a uniform fashion across the country?

Reference was made in the presentation to the significant level of work done by veterinary practitioners in rural areas and for the farming community in general. That must be acknowledged. I remember Pat Gallagher in Mohill and Tim Mulligan in Arva and others who were characters in their own right in rural areas. They were people on whom there was a dependence in rural areas in difficult times and while they have been replaced by more modern veterinary practices, there is still a sense that people are dependent on their vet. If anything goes wrong on the farm, one lifts the phone and rings the vet and he or she is there. There is no messing.

A neighbour of mine said recently that he brought his dog to the vet and the dog got more tests done in half an hour than one would hope to get in three years in a hospital due to the waiting times. That type of service must be acknowledged. I share the fears outlined by the witnesses about the corporatisation of the service. We see that in other sectors also, for example, in the pharmacy sector. Boots and other chains of chemist shops have come into the market. I do not think that would be a positive development for the agricultural community. It would be

very negative if the sector were to go down that route. I support the call made by the witnesses to ensure it does not happen. It is essential that we would maintain the type of relationship people in rural areas have with their veterinary practices.

Reference was made to veterinary work in factories and various other locations around the country. How do vets get those contracts? How does the system work? I have heard some annoyance from vets that they do not get as much work in factories as was the case previously. They feel that it is boxed off for some but not for everyone. I would welcome the views of the witnesses on how the system works in the various factories. Some younger vets might like to get a share of it but they do not seem to get it. Why is that? I would welcome if the witnesses could shed some light on that.

Going back to TB, I seek the views of the witnesses on the herds that are in the closed systems, where it is known they have TB and yet they are left there to be finished or brought to the factory without being traded outside of that. I would also like to get the views of the witnesses on the accuracy of the testing. More and more farmers are pointing to deer as a factor in the spread of TB. If animals go down in a test, the reactors are taken away and a couple of months later everything is okay but there are still deer in the vicinity that are not taken away. Are they maintaining the infection and spreading it?

**Deputy Charlie McConalogue:** I welcome the representatives from Veterinary Ireland here today. I thank the witnesses for taking the time to come before us and for their presentation. I am interested in their perspective on Professor More's commentary and any thoughts they might have on it in terms of the efficacy of the current eradication programme and the risk-based approach which he believes is required. He suggests it was the primary reason for the success in Australia and New Zealand. Such an approach would give rise to grave concern. The movement element of it would give rise to great concern among the farming community. I put a question to Professor More on the 30-day pre-movement test. What are the views of the witnesses on the benefits or otherwise of that?

Last year we discussed the ownership of veterinary practices and the deregulation of ownership. I would welcome an update on the experience in the past year of how that is unfolding. We discussed Veterinary Ireland's concerns in that regard, which are well grounded. This is an issue in which the committee has taken an interest.

Reference was made in the presentation to the fact that approximately 600 members of the veterinary profession are employed by the Department on a part-time basis in the inspection services for meat exports. In recent days the Department has issued a call for private veterinary inspectors to indicate their interest in carrying out inspection roles at airports and ports in the event of a hard Brexit. Has the Department had any consultation with Veterinary Ireland in advance of making that call? Last summer the Department had indicated its intention to employ 300 veterinary inspectors within the Department to meet its requirements and be prepared for a hard Brexit. It later downgraded the number to 116 veterinary inspectors. As far as I understand, currently, the Department has no contingency in place in terms of in-house staff. I would be interested in the perspective of the witnesses in terms of the demands on veterinary practices. It is already a stretched profession. Do the witnesses feel there is sufficient capacity within the private sector? In the next week or two we hope that Brexit will, at a minimum, be delayed but in the event of a hard Brexit, do they believe there is capacity to meet the Department's recent call for tenders?

**Chairman:** I acknowledge the contribution the witnesses make to the local rural economy

from an agricultural point of view. I have a follow-on question based on what Deputy McConalogue said about the call for vets to become part of the Border surveillance system in the event of Brexit. What are the implications of Brexit from a TB testing point of view? Vets are contracted to do TB testing for farmers at specific times of the year. A time is set out and nearly every farmer knows at this stage when he will have a TB test. What effect will it have on TB if vets leave their practice and become involved in the inspection control work?

We heard much commentary from Professor More, and we dealt with the matter before Christmas as well. What percentage of a vet's time is spent on TB testing? Is the figure available? In some cases a vet could spend a full day or a half day on a farm. The job of a vet is a busy one anyway. I noticed smiles on the faces of some when I asked a question previously about the target of TB-free status being achieved by 2030. In the event of that day arriving, how much free time do the witnesses believe vets will have and what will they do with it? Do the witnesses believe the target is achievable?

**Mr. Conor Geraghty:** I will take the questions on TB and I will respond to Deputy Cahill's question on Johnne's disease. I will respond in the order in which the questions were asked. In response to Deputy Martin Kenny, the average length on farm is four weeks. My understanding is that this is because of valuation. If there is more than one reactor, the farmer has the right to have it live-valued by an independent valuer and has the right of appeal. That accounts for some of the time. Deputy Cahill might be able to account for some of the other delays. The Department can appeal the valuation as well. When the test has been read within the 72-hour period, we have between 48 and 72 hours in which to upload it onto the system. If we stray outside that timeframe, which is in our contract, it goes down as a black mark against us and we have increased inspection levels as a result.

Deputy Kenny asked whether the vaccination of badgers would work. The studies we have seen are based on research done in Ireland by Professor More and others, led by the Department and UCD. Those studies suggest that vaccination is as good as culling. That is why it is intended to use it instead of culling. Obviously, we have not conducted any research of our own. We have to look at the peer-reviewed science and use it as a guide when determining what is scientifically correct.

A question was also asked about the issue of feed lots. As some farms have restricted status, they do not need to have multiple tests if they have reactors. Such farms generally finish a lot of cattle indoors. They might have grazing. It is my understanding that they are not allowed to have breeding herds. They must have biosecure fencing, which means electric fencing that is 3 m from the boundary.

The observation that wildlife does not respect boundaries is a valid one. We have not seen any research with regard to neighbours. We are not aware of any such research. I think Professor More mentioned that such research is just starting.

Deputy Kenny also asked about the accuracy of the testing. As Professor More has said, no test is 100% accurate. Tests are basically judged on sensitivity, which is the ability to pick up infected animals, and on specificity, which is the ability not to take out false positives. The skin test, which is used worldwide, is highly specific. Approximately two animals per 1,000 are false positives. In other words, they show up as reactors but do not have TB. That is quite important. Depending on the studies one reads, sensitivity can vary from below 50% to up to 90%. I think those variations account for animals at different stages of the disease. As Professor More mentioned earlier, it is not as good very early in the infected stage as it is when

an animal is heavily infected. As the disease progresses in an animal, it gets clinical TB and might end up getting thin. When its immune system is affected by the disease, it does not have the same ability to respond. The reactor lump that one sees on an animal's neck is an immune response. When the animal's immune system is reduced, the ability of the test is affected. Of course there are other factors that depend on individual cows and on the level of infection. There are other disease states that might affect immunity.

While the test is quite good, it is limited when it comes to individual animals because its effectiveness drops to approximately 70%. There is a difference between finding an infected herd and finding an infected animal. If there is TB in an average herd of 70 cattle, it can be identified that the herd is infected but it might not be possible to identify all the animals within the herd that are infected. Animal testing varies between individual animal testing and herd testing. The animal screen that we do is a herd test. It looks primarily at identifying which herds are infected. The Department then comes in with the interferon gamma testing to try to identify more individuals within the herd that are infected. The interferon gamma test, which is a blood test, has a higher level of sensitivity. This means it will find more infected animals within the herd, but it has lower specificity, which means there can be a false positive rate of up to 10%. As a screening test, it will take out many more false positives than the skin test.

People think the factory test is the definitive one, but in fact it is approximately 33% sensitive only. It takes time for an animal that has been infected to develop a lesion that is visible to the naked eye at a glance. We are not talking about testing the glands; we are talking about a vet cutting the glands and seeing whether there is an actual lesion there. That is actually the least sensitive test. Some of the false positives mentioned during Professor More's presentation can be attributed to the fact that it is too early in the lifetime of the disease for a lesion to have formed, or the lesion is too small to be seen with the naked eye.

Deputy McConalogue asked about the efficacy of the current programme. As Mr. Murphy has outlined, there was a significant human health element in the TB programme when it started because of the levels of TB in the human population. Those levels reduced rapidly in the early years of the TB programme, which was long before my time. The programme then became as much about trade as anything else. When we joined the EU, we signed up to guidelines providing that we must have a certain level of TB control to trade with our European partners. Third countries have their own TB testing requirements.

As Professor More has rightly said, the notion of eradication does not become possible until the reproductive ratio goes below one. Vets have known for many years that is very difficult to get the reproductive ratio below one because of various external factors like cattle movements, fragmentation of farms, herd mixing and the presence of deer and other wildlife.

**Deputy Charlie McConalogue:** Mr. Geraghty has said that we need to get the reproductive ratio below one. What exactly is the reproductive ratio?

**Mr. Conor Geraghty:** I will explain that by talking about humans. If I have influenza or a cold, and I come in here and give the virus to more than one person, it will spread. If I give it to less than one person, it will not spread. Basically, it is an epidemiological matter.

We have a very good control programme at the moment. When the animal health computer system was introduced in 2004, it gave the Department full traceability of all animals and allowed for much faster tracing of animals that were sold from an infected herd. If such animals can be traced forward, they can be tested before they get a chance to spread disease in a herd.

This also allows back-tracing for lesions, etc., to take place. It all ties in with the aim of the tagging. The animal health computer system is the glue that binds it all together. As part of each herd test, we actively manage and fix any discrepancies on the system. It is part of our contract to fix these discrepancies or account for discrepancies on the system in real time, before the test is reported within 72 hours. That has allowed us to bring our level down. The fairly significant progress that was made between 2004 and 2014 has allowed us to talk about eradication now. It is unfortunate that the programme all those years ago was called an eradication programme, because we did not really have the ability to put in place an eradication programme until we reached the level we are at now.

We have been asked whether the current programme is capable of eradicating TB. I concur with Professor More that if we continue to do everything we are doing at the moment, we will eradicate it. However, the science indicates to us that it will probably be 2060 or 2070 before that happens. It is a question of whether the programme should be ramped up in order to achieve eradication more quickly and, if so, what the ramifications of that would be. As vets, we are primarily scientists, so it makes perfect sense to us to ramp up the programme to try to get rid of a disease more quickly. When we speak to other stakeholders around the table, however, we realise that there is a cost-benefit element to this. It is a question of who will meet the cost of imposing severe restrictions on certain farms. Will those farmers be compensated? The representative bodies will have their say on that. I sit on the TB forum on behalf of Veterinary Ireland. When these issues have been discussed at that forum, proposals such as risk-based trading and herd classification have been severely resisted by farm organisations in general because there is no clear path setting out how farmers will be compensated for the immediate losses they will suffer if such restrictions are introduced. It makes sense for us to try to contain disease where it is and then to eradicate it. It would have to work better in practice before bringing it from a reproductive rate of 1.16 to just under one. We have not seen the cost-benefit analysis yet. An independent study is being commissioned by a forum to see about cost-sharing and such.

The Deputy's second point was about the risk-based approach, which makes sense. On the difference in testing animals and testing herds, once a herd is infected, rather than leaving animals in a herd undetected because the test is imperfect, it is important to realise that the herd is infected. It is then de-restricted but it is still higher risk. If we treat it on a herd basis then we have a better chance to take necessary steps, especially with herds with chronic TB, and to do something for biosecurity. The recommendations from the forum include biosecurity advice for farmers for those herds and the use of the pre-movement tests, which would help in those isolated cases of herds with chronic TB or which have been recently infected, to try to prevent the spread of TB from those herds into the 97% of herds that do not have TB.

The Chairman asked about the time spent testing for TB. We are talking about average figures here. Some 7 million tests are done in Ireland on approximately 1,000 batches of 7,000 cattle per annum. There are approximately 100,000 herds, which is approximately 100 herds per veterinarian. That is two herds of 70 per week per vet working in cattle practice. I know that individual vets do much more than that while other vets do less than that. It was a central part of veterinary practice for a long time. Veterinary practices over the Past two decades have diversified and expanded into companion animals, retail sales, herd health advice and some vets do factory work. It is of relatively lesser importance to veterinary practice than it was but it is still important. If one looks at costings in the Department papers, one third of veterinary jobs could be financially affected by that, which would reduce service. The main issue that large animal practice has in Ireland with regard to TB testing is that it fills the quieter times of the



year because we are a seasonal calving and lambing country, unlike our European colleagues with year-round systems. We need many vets from now until 1 May and maybe again in November and December. There is not a lot to do in the rest of the year, which is the main issue in Ireland, if there was not TB testing and temporary veterinary inspector work.

Deputy Cahill asked about Johne's disease. The sensitivity of the test and its ability to find positive animals is much lower than our TB skin test. That is widely known. It is quite high for false positives, at more than 90%. When we are testing for Johne's disease, we are looking to find an infected herd over a period of five years rather than infected animals. Once one has determined which herds are infected, one concentrates, through management, on reducing infection in those herds with the veterinary risk management and action plan. In negative herds, one concentrates on trying to give best advice to prevent them from becoming infected by buying in the organism. It is a difficult disease to manage once it is in. In 2005, we estimated that approximately 18% of Irish herds were infected with Johne's disease. From our initial figures from the pilot programme that Animal Health Ireland, AHI, did over the past five years, it is now 27%, so it is expanding. The current programme is quite good at helping individual farmers with infected herds to contain it within their herds. The problem we have with it as a programme is that we feel that there is a threshold above which it will be impossible to reduce the level of Johne's disease in Irish herds to a negligible amount over ten to 20 years. Much of the increase from 18% to 27% can be accounted for by dairy expansion. There was a lot of movement and trade.

We believe that now is the time to take the hard decision. A study from Teagasc for AHI a couple of years ago determined that a programme that would work and deliver the action needed to reduce Johne's disease in the national herd would cost approximately €13 million a year. Unfortunately, less than €1 million a year is allocated so while the programme we have is good for individual farms that are infected, we have concerns about the prevalence at a national level. We support the programme because any reduction in Johne's disease is good but it may not reduce the national prevalence and may miss that threshold time opportunity that we have. I will let others answer the other questions.

**Deputy Martin Kenny:** I think Mr. Geraghty said that the test was approximately 70% accurate. Suckler farmers have an average of 15 to 18 cows. Those are small numbers so if the tests are not as accurate as we would like them to be and there are smaller numbers in the herd, does that mean there is more of a possibility of herds not being identified? Does Mr. Geraghty understand what I mean? He mentioned a herd of 70 cows. That is fair enough. The chances are that if there is anything there, it will be caught, or that if one is missed, the next will be got. When talking about smaller herds, would that not have an impact?

**Mr. Conor Geraghty:** The variation really occurs depending on the time of the disease. Very early on in the disease, one might miss all of them but those animals are still there for the following tests and that is when one sees the disease showing up because it is further on. If one is unlucky enough just to hit it earlier on in the disease outbreak, one may miss some animals but as time goes on, it will become more apparent. Animals are not all infected at the same time. On those maps which show one animal getting infected, then infecting another and another, there is a timespan. Generally, it is highly effective at identifying infected herds but when one goes back to do the retest, one might take out two or three more, if that makes sense.

**Mr. Gerry Neary:** I will speak a little on TB but mostly on incorporation of practices for temporary veterinary practices. At present, four practices in Ireland have been purchased by two British corporate bodies, which have purchased two each. There is strong anecdotal evidence

that between 40 and 100 practices have been assessed and would be at what is called a pre-purchase stage. The Veterinary Council issued a statement on ownership that anybody could own a practice. It subsequently put that under review and then deleted it from the code of conduct pending further discussion. We surveyed our members and found that approximately 86% of our members do not want lay incorporation involved in veterinary practices. The proponents of lay corporate bodies being involved in practices made the case that young vets would benefit significantly from continuing professional development, better working conditions and better relations. There was a debate in Mullingar and those young vets, who have their own Progressive Veterinary Network, voted by 86% that they did not want lay incorporation of veterinary practices. The Veterinary Council is resurveying our surveys. It has also belatedly consulted with other stakeholders. The general gist is roughly 80% to 85% by all parties who voted to reject any proposals for lay incorporation.

I did their survey yesterday. It is being carried out by an independent company. I was amazed at the structure of the questions they were asking. The first significant question they asked was whether I was opposed to corporate ownership of veterinary practices. I did not really know how to answer it, so I said "No". The next question they asked was, "Why are you opposed to lay ownership-operation of veterinary practice?" It is a completely different question. Ownership is one matter and ownership and operation is completely different. While a case can be made that the legalities around ownership of veterinary practice are strong, our legal advice would be that one would have to put up a fairly ebullient case to convince anybody that one cannot own what one wants to own. However, what is clear is that lay corporate bodies, under the Veterinary Practice Act 2005, cannot operate veterinary practices. They cannot prescribe drugs. It would be doubtful if they could have any input into management. They cannot, according to section 58, invoice, nor can a drug company supply drugs to a limited lay-corporate body.

Probably the main two points that would be made by the protagonists of lay incorporation are first, that young veterinaries would like it - that has been absolutely flattened; and the second would relate to the capacity of these vulture funds to invest large amounts of money in infrastructure and better conditions. Those can be achieved within the present structure by ultimately giving corporate status to existing practices that are veterinarian owned. If there is an ideal solution to emerge from all this when all has settled down, I would hope that we would have the sense for all the reasons we enumerated in our report some of which have been validated even recently - I am sure the committee will be aware of costings for night services and other matters in the new systems - to realise that the solution would be that veterinaries would be given an overdue incorporation status which is available to all others involved in services industries. It would allow practices to be able to harvest some money - I am sure farmers would understand this - to invest in their practices and would be able to provide such services as MRI and CT scans and advanced equipment, which a corporate body, possibly, if it was going well, would be able to supply.

*Deputy Jackie Cahill took the Chair.*

**Vice Chairman:** I do not understand some of the points Mr. Neary made. At present, a group of veterinaries get together, form a partnership and have a company and Mr. Neary stated a corporate body cannot issue an invoice. When a person gets a bill from his or her veterinarian at present, it is coming from the company. I do not understand how Mr. Neary can say that about the ownership. For instance, I get my bill from my veterinarian and it comes from whatever the named company is. Obviously, the girl in the office puts the bill together and issues it. If the ownership was in somebody else's name, would it not be the same? If some person in

England owned it, would the invoice not come out the same way?

**Mr. Gerry Neary:** The problem with lay incorporates is a problem of governance in that if there is a corporate body in which there are veterinarians only - the owners - they are all answerable to and ethically bound by the Veterinary Council. In the legal advice we got, one of the star issues that was pointed out to us was that the Veterinary Council issued an edict on ownership being allowed to anybody without putting any structures in place at least whereby lay people could be answerable to somebody for how they would run a veterinary practice. The fundamental problem is that lay corporates would have no governance whatsoever. They would have no disciplinary procedures that are both ethically and legally placed on veterinarians. This is the fundamental problem we would see between lay incorporation and veterinarian incorporation.

**Vice Chairman:** I understand now. I apologise to Mr. Neary for stopping him in his tracks.

**Mr. Gerry Neary:** It is fine. It is an important point. The real point is that we are bound by ethics to treat animals even if we are not paid. We do a lot of voluntary work. We do a lot of work with wildlife coming in to us. There is an ethical obligation on us to do it and not to let any animal suffer, but there may be no financial reward for doing it.

Mention was made of how the factory shifts are distributed. There was always an open panel system. Every young veterinarian in the country, including myself when I was young, got on a panel. It was an open system. It was a good system. Then, unilaterally, in 2012, the Department, as part of a public service embargo we would have to assume, decided that it was closing the panels. Until such time as we reached agreement with the Department only two or three weeks ago, that embargo remained. I would say the reopening of the panels will occur for young vets on an as-needed basis. The reason for the as-needed basis rather than the open policy is the zero-hour legislation that will come in. Anybody who went on the panel heretofore took his or her one shift a year or one shift a month and as vets left the panel, the others gradually moved up. Some lads are 20th on a panel before they get a permanent shift. The panels will be opened again but not to the extent where they are wide open because of zero hour legislation which would require that if they got no work, they would have to be paid some money. The status on the panels, from 2012 to 2019, was as a result of that largely public service embargo.

I will just make a few comments from an age perspective on the TB scheme. Sometimes we forget the progress that has been made. Mr. Geraghty referred to it being a human problem. I remember once early in life, an old man spoke to me in Kilbegnet, Creggs. He said that people really do not understand the progress that had been made with the TB eradication - it probably never should have been called an "eradication scheme" - or TB testing scheme in that his job in the early 1950s, as he was one of the few in the parish who had a shotgun, was to go his neighbours' place to shoot the cows who were emaciated and coughing blood. When we are talking about the eradication of TB, except for an odd carrier case, we have never seen TB as it existed in cattle where it was a debilitating disease of considerable economic significance where those animals were infecting other animals and where the milk was also infecting people. We should always be careful. As Deputy Cahill referred to with the brucellosis scheme, one does not forget where one came from. At one stage, we had the brucellosis almost eradicated. When we statistically reached official brucellosis free, OBF, status, we stopped testing. It came at the same time as there was a massive influx of southern cattle into the west for new beef incentives and we absolutely blew brucellosis back out of the water again.

Progress has been made. I would remind Deputy Cahill, only because he was talking about it, about the risk-based assessment. To my recollection, towards the terminal stages of the

brucellosis eradication scheme there was a risk-based assessment. As I recall, when I started first anyway, one had a red card, a brown card and a green card for one's cow, depending on her brucellosis status. Those with red cards could only go into red herds, amber cards could only go into amber or red herds and green cards could go into any herd. Even at that stage of brucellosis, movement was allowed from cleaner herds back to lesser herds but not from high risk herds to lesser risk herds.

**Vice Chairman:** I do not remember that.

**Mr. Gerry Neary:** I remember it. Deputy McConalogue asked my opinion of Professor More's suggestion. With regard to TB and Johne's disease, risk-based assessments must play a bigger part when there are no specific deaths. We must assess the risk of the herd infecting other animals rather than relying on specific tests to identify particular animals and stating the rest of the herd is fine. A herd analysis of risk must be done.

The 30 day pre-movement test after six months was mentioned. My understanding of the outcome of TB tests done way back is that in the first year of having TB, four reactors put with four ordinary cattle are unlikely to spread it but if they are left together for a second year the spread occurs. In other words, that is when the breakdown happens in the reactors and they become spreaders. With regard to yearly tests as opposed to tests every six months, if a farmer buys an animal on a specific day, which is almost a year since that animal had been tested, and that farmer's annual herd test is not until almost the same time the following year, it means that potentially an animal bought in could go two years without a test. This is a huge risk as it will have gone into a second year without a test. There would be merit to having a pre-movement test of high-risk animals. It would be of benefit.

With regard to residual animals and the two years in which they can potentially spread TB, the single greatest godsend for the TB testing scheme was the farmer payment. The farmer payment means a test is guaranteed every year. I remember having entire years off in the early 1980s. In a particular budgetary year either 20% or 40% of the high-risk herds would be tested and the remainder of the herds would be left untested for that year, and the following year perhaps 60% might be done but others went untested again. There was no hope TB would be reduced, never mind eradicated, so long that residual TB was allowed to reinfect. At least now, when we have a test every year, most TB will be picked up at a point before the animal's ability to spread it.

With regard to how we will manage inspections at ports, we were consulted briefly - no, in fact, we were told it was happening. With regard to availability, the Veterinary Council's register has increased from 2,600 to 2,800 this year. We are producing plenty of graduates in UCD, Trinity, Budapest, Warsaw-----

**Mr. Finbarr Murphy:** Not Trinity.

**Mr. Gerry Neary:** Sorry, Trinity went in my second year.

**Vice Chairman:** Only UCD.

**Mr. Gerry Neary:** We have plenty of people in UCD, Warsaw and all the English colleges. What is essential is we have an increase of 200 people on the Veterinary Council register this year. We have never been found wanting when a job needs to be done.

**Vice Chairman:** I want to go back to the Veterinary Council and the corporate ownership of

practices. Where is that at? Mr. Neary said there is no corporate governance at present. What does the Veterinary Council do? It was stated that a huge number of practices are under negotiation for sale and four have gone through. Will Veterinary Ireland propose that legislation should be changed? Where does it stand with regard to the Veterinary Council?

**Mr. Gerry Neary:** We have made the point that our understanding is those practices are outside the law and that with lay involvement in the management running them they are not covered under the Veterinary Practice Act.

**Vice Chairman:** That is a serious statement.

**Mr. Gerry Neary:** It is. We have made a complaint to the Veterinary Council.

**Vice Chairman:** Has the Veterinary Council done anything to progress it? Has it made a comment on whether it agrees or disagrees?

**Mr. Finbarr Murphy:** The council is undertaking a review. As Mr. Neary alluded to earlier, the offending clause was removed in September, which had been inserted the previous December. It is reviewing the question of lay ownership and control of veterinary practices. It has consulted widely with stakeholders, farmers, vets and the public. I understand it will come to a conclusion on the compatibility of lay involvement in the practice of veterinary medicine following this consultative process.

**Vice Chairman:** Will sales be allowed to continue while the process is ongoing?

**Mr. Finbarr Murphy:** We do not know. As was alluded to earlier, two practices-----

**Vice Chairman:** I apologise for interrupting. Who registers a practice? Must a practice be registered?

**Mr. Finbarr Murphy:** Individual veterinary practitioners must be registered with the Veterinary Council and they must also register their practices under the premises accreditation scheme as a practice, clinic or hospital.

**Vice Chairman:** Register with whom?

**Mr. Finbarr Murphy:** With the Veterinary Council under its particular scheme.

**Vice Chairman:** Surely if there are question marks it should put on the handbrake until the question marks are resolved.

**Mr. Finbarr Murphy:** That would certainly be very helpful but the review is ongoing. It indicated to us it expects the result of the review to be available towards the end of March.

**Vice Chairman:** There could be any number of sales between now and then and the Veterinary Council will then state it cannot accredit them. That will be a mess. Why would it let that continue?

**Mr. Gerry Neary:** It is an issue that needs to be dealt with.

**Deputy Martin Kenny:** In theory, the witnesses are saying a lay corporation can buy a veterinary practice and run it. This has been done in a number of cases and in other cases people are preparing to do it. These practices are then outside the regulations. In theory, the way we could get around this is if the witnesses came together and went to the people with all of the

money and told them they would front the practices as vets. They could then do the very same thing except they would have qualified vets. My point is Veterinary Ireland's real opposition is to mass ownership of veterinary practices by the big guys taking over and pushing out the small guys. Is that where the witnesses are coming from?

**Mr. Gerry Neary:** The problem we have is not ownership, it is the autonomy of veterinary practitioners to practise veterinary medicine free from encumbrances from clients, corporate bodies or lay people who may have an agenda that does not meet our ethics. It really is a simple as this. It is autonomy to practice veterinary medicine in an ethically and legally correct way. Vets want to maintain this for themselves. There was a recent case in Germany where a Dutch pharmaceutical company bought a Dutch pharmacy. The German pharmaceutical council took a case to the European courts and within the past four or five months a ruling was made that each state, if it sees good reason for a stance it wishes to take on human health, animal health or professional ethics grounds is within its rights to protect those professions. This is used. Since the Veterinary Practice Act of the 1800s, legislation has always protected the practice of veterinary medicine from lay corporate bodies and lay persons. It is not a question of who owns the practice; our legal advice is that it does not really matter. Vets have to be able to run their practices independently; therein lies the crux of the matter.

**Deputy Martin Kenny:** After a young vet has practised for a while, he or she normally proceeds to take a share in a practice when an older vet retires. Will this measure inhibit that possibility for them?

**Mr. Gerry Neary:** It will end it. Forever more they will be unmotivated employees of a big corporate. I am retired from practice, but the demotivation to which this measure will give rise in the profession bothers me, as do the economic consequences. A vet will be paid to do a job until 5 p.m. and work a set number of hours per week, but most vets work beyond 5 p.m. and do whatever they have to do at any given time. It is their practice, business and client who is also their neighbour. I have often been dressed to attend a family event such as Holy Communion and instead had to go to section a ewe, getting blood all over myself in the process, but one just has to do it. I am sure there will not be the same motivation if this measure goes through.

I have been over and back to England and seen what has happened there in large animal practices. It has gone from being local to regional. In the drive towards incorporation most companies kept the small animal part of their businesses but got rid of the large animal part by either closing it down or selling it to a group of fellows who might operate within an 80-mile radius. There are herd health programmes and three-hour guarantees to reach an emergency case, but it has done away with sheep practices altogether because the fees for lambing or sectioning a ewe during the night mean that such services cannot be justified. Many now get rid of animals in distress, rather than bring them to a vet. There are huge animal welfare issues related to this measure.

I worked in an area which was very heavily populated with sheep. I had to get up at 3 a.m. to put a lamb's intestines back in for €15. That is what we do because we are vets. There are point to point meetings, shows and other gatherings where a vet is required to be, free of charge. It is a system, of which we are very proud. Our medical colleagues have diverged into out-of-hours services, but I would not like to see us go down that route, or the English route, in veterinary practice. Our system is town and village-based and on a continuous, 24/7, 365 days per year basis. which we should protect.

**Mr. Donal Lynch:** Mr. Neary has referred to the place vets have as part of the community.

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It has worked well for a long period. We all get up during the night. Mr. Geraghty has referred to the number of hours we work, as well as the percentage of our time taken up by TB testing. We work 24 hours a day and if somebody is stuck, we will help him or her. We welcome the meat factory work that has opened up recently and want to see young vets coming on board and being part of the fabric of the community, as they have been in the past. Deputy Cahill referred to what might happen to somatic cell counts. We cannot just take antibiotics away; we have to have an integrated management system, where a small group of vets work with a farmer and know what is happening on a farm. They know what the farmer is like and what his or her family situation is. These management structures make it possible to reduce the amounts of antibiotics being used on a farm by using intramammary injections instead. It does not happen as a single event. There is a complete picture which involves managing a cow and a farm to reduce the amounts of antibiotics used.

**Vice Chairman:** I thank the delegates for attending and their presentations.

The joint committee adjourned at 6.45 p.m. *sine die*.