

Environment, Food and Rural Affairs Committee

Oral evidence: Work of the Chief Veterinary Officer, HC 1576

Wednesday 28 November 2018

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Members present: Neil Parish (Chair); Alan Brown; Dr Caroline Johnson; Kerry McCarthy; Mrs Sheryll Murray; David Simpson; Angela Smith; Julian Sturdy.

Questions 1 - 63

Witness

I: Christine Middlemiss, Chief Veterinary Officer, Department for Environment, Food and Rural Affairs.

Examination of witness

Witness: Christine Middlemiss.

Q1 **Chair:** Thank you very much for coming this morning. Perhaps you ought to introduce yourself for the record.

Christine Middlemiss: I am Christine Middlemiss. I am the UK's Chief Veterinary Officer, working for DEFRA.

Q2 **Chair:** It is a very great pleasure to have you before the Committee, because it is really important that we work with the veterinary profession, the Food Standards Agency and all of these things that fit together. It is so important. My first question to you is, what do you hope to achieve in your first five years as Chief Veterinary Officer? That is a nice open question.

Christine Middlemiss: It is very open and huge. The starting point is that I took over from Nigel Gibbons at the beginning of March. Nigel had been in post as UK CVO for 10 years. He was a consummate professional and very highly regarded, so the first challenge in coming in is stepping into the enormous shoes that Nigel left. The priorities are the things I want and hope to achieve in the time, building the relationships that Nigel had worked on so well for 10 years, both with my fellow CVOs and in the UK, which is really important because animals move up and down across the UK. We trade as the UK. While we have devolved animal health policy, for very good reasons we need to work together.

The next round of that is international relationships. We have the EU CVOs, and we do not know exactly what our relationship with them will look like going forward in terms of official meetings and things. Again, it is very important for knowledge exchange, science and evidence that we have a good working relationship on that, and, wider, building broader international engagement when we become more stand-alone in terms of the OIE, the world animal health organisation, and what our USP as the UK is in terms of being world-leading in animal health and welfare. The relationships are a key priority, supporting that USP. What do we mean when we say we are world-leading in animal health and welfare and how do I, as UK Chief Veterinary Officer, evidence that?

We care about animal diseases and the threat of exotic notifiable diseases. We have had some experience of those, of course, in the past. African swine fever in Europe is something that we are thinking prominently about. I need to help us prevent them, prepare for a disease outbreak, be able to respond quickly and recover. That remains a key priority. There are then the diseases that we have, such as TB in England, which is a massive animal health problem, an economic problem and indeed a social rural impact problem. A lot of work is under way. We will not solve the problem in five years, but I want to see us continue



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to take some concrete steps towards reducing our level of pandemic TB in cattle.

- Q3 **Chair:** What I learned from the 10 years that I was in the European Parliament is that the European Commission does have some very good veterinarians. They have a lot of information on disease and disease control. Are you optimistic that, as we leave, we can keep good contact with them? Disease does not recognise the EU border more than it does the British border or anybody else. Are you confident that we can still tap into that expertise and work together? Eradicating disease or controlling disease is always a good thing.

Christine Middlemiss: I hope and intend that we are not being overly confident in that as the relationship changes. Our scientists in the UK are very well respected and very plugged into EU networks as they are both formal and informal. We have less certainty about what our role in the formal networks will be, depending on what the deal is, but we are very much focused on maintaining and building those more informal relationships through research partnerships. We are very transparent in sharing our risk assessments and evidence bases and absolutely intend to continue that and build on it where appropriate.

- Q4 **Chair:** One advantage we have, certainly with poultry, is that, if there is an outbreak of avian flu, under the existing rules with the EU you can isolate that outbreak and take out stock production moving from a regional area but the rest of the country can trade. We do not want to move into a situation where we get two or three outbreaks of avian flu and the whole poultry industry is banned from exporting into the EU. Are you confident we can maintain that position?

Christine Middlemiss: This is a concept known as regionalisation and it is something that the EU is very supportive of because it works both ways.

- Q5 **Chair:** It does, exactly. We could ban all theirs at the same time, could we not?

Christine Middlemiss: Yes. In the political declaration released last week, there was a specific line that recognised treating each other and reciprocity in terms of being a single entity, so, whether that is the UK or the EU, we are recognised as a single entity in which we will regionalise on the basis of appropriate epidemiological information. That means you would look at the disease risk, you would look at the pathways and we would undertake appropriate controls to contain disease while minimising the impact on unaffected farms to trade, and recognise that both for our products going to the EU and, likewise, from the EU coming to us.

Chair: I hope we can achieve that.

- Q6 **Angela Smith:** Hello, Christine. We have met before briefly. Do you have confidence that DEFRA fully understands the importance of mitigating shortages in the UK veterinary workforce?



Christine Middlemiss: In terms of the background to this, and for the earlier question, the Royal College registers all vets who want to practise in the UK and, indeed, vets who want to be registered and meet the standards but do not practise. They are telling us that there has been no reduction in vets registering. However, we know from BVA and the Major Employers Group that we do have a shortage of vets in the profession. This is not just EU-exit related; this has been going on for a period. It is about 11%. There is a lot of work through Vet Futures trying to understand why this is. Part of it is that the vets drop out of the profession. They no longer see it as being attractive; that is primarily around being in practice, that first-opinion work but not necessarily. Through the Veterinary Capability and Capacity Project, which is the Royal College, BVA and ourselves with the devolved Administrations, there is work to understand more about that.

Within those regular vets, if you like, you have a subset who are official vets who have done further training and have approval to undertake some form of Government work. Some of us are directly employed by the Government, but the vast majority are out in practice. It is about 12,000 overall and most of those sign vet certificates.

The increase in terms of Government work is around certification of exports of food if we become a third country. At the moment, food moves freely. It is based on our disease freedoms and the fact that our food processing plants are approved to EU standards and we get audited on those. When you become a third country, regardless, you have to certify those food products. The certification will be done by vets—OVs—so this subset that have additional training and approval will sign certificates. The certification support officers are to help them gather the information to be able to do the signing. A lot of it is about temperature checks and processes within food factories and so on. The CSOs will undergo appropriate training. That is one of the actions on shortages.

Another part is making the certification programme more electronic—to do away, as much as possible, with paperwork, post and so on to make the whole process easier for that. We are working very much with food businesses to understand the volume because, as it had not been certified before and it just moved with consignment notes, nobody has a good handle on what that volume in the past has been. We are constantly working with them and refining our figures. At the moment, our estimate assessment is about 200% increase in certification. We are working with the major employers to understand whether they have the capacity to meet that. At the moment, they are telling us that they do and that they will be able to get that in. Inevitably, there will be a stop-start date depending on what deal there is and whether we are a third country in order to make that happen.

Q7 Angela Smith: Christine, do you accept that, regardless of whatever the RCVS has agreed to—and we do not know because we need to talk to the RCVS, I would suggest—the BVA, the professional body, is unhappy at



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the idea of, in their eyes, official veterinarians being, to some extent, downgraded and that there are risks to food safety and food security?

Christine Middlemiss: I disagree that there are risks at all. Ultimately, it is for the vet to sign that certificate. They have to be content that they have the evidence as to what they are signing off and the health statements therein. A lot of it will be about their relationship and how they work with a certifying support officer. If they are not content with the evidence they get, they go and look at it themselves.

Q8 **Angela Smith:** Are the vets responsible for signing off these certificates happy with this arrangement? Have they been consulted?

Christine Middlemiss: We have consulted widely. The BVA has a number of representative groups. We have spoken with many of the major employers of the OV's and with the Royal College. It has been through the Royal College's standards committee and so on. There has been reasonably wide consultation on it.

In a past life, I certified food for export, so I am quite familiar with the processes. I know the buck stops with me and what I am signing. Much of the evidence you get is electronic evidence, such as checking temperature records and things. It is up to you to understand how much you want to audit and we are quite clear it is for the OV's to be comfortable that they have the right evidence to sign.

Q9 **Angela Smith:** To what extent is the veterinary profession reliant on non-UK qualified vets?

Christine Middlemiss: It varies across the profession. Approximately 25% of vets registered with the Royal College are of EU or EEA origin at the moment. As we know, over 90% of employed or contract vets in the Food Standards Agency are of EU origin. Indeed, in the Animal and Plant Health Agency, it is over 50%. There are a lot of EU-qualified vets who work within our systems and they are our colleagues and our friends, and we very much hope that they feel comfortable to stay here.

Q10 **Chair:** Sorry to interrupt. Is there also a larger penetration of foreign vets in the large animal situation? There is sometimes a problem here in getting our own vets who sometimes go into small animals.

Christine Middlemiss: I do not have specific figures. Anecdotally, because I am reasonably well plugged in to that, there is a growing number of younger assistant vets across the profession who are of non-UK origin. That is because of the make-up of the profession overall. I was talking about people dropping out, lifestyle expectations and so on. Large animal practice, despite all the changes, does not suit everybody.

Chair: They are under pressure, are they not?

Christine Middlemiss: Yes.

Q11 **Angela Smith:** We know now, contrary to what we were told at a



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previous Committee, that EU vets coming into this country are trained to standard because they are registered by the RCVS.

Christine Middlemiss: Yes.

- Q12 **Angela Smith:** We can have that for the record, because we were told previously that that was not the case. That is really important. Surely there is a risk, Christine, in the sense that we are quite dependent on EU vets to keep our essential services going here. There is a risk that a really serious shortage could materialise if these vets go home or we have difficulty replacing vets by bringing more vets in from the EU. Do you feel confident that the necessary preparation is being taken and put in place to prevent a serious shortage occurring?

Christine Middlemiss: There is some preparation in that we—the RCVS, ourselves and the BVA—are working together. We know the evidence and we are inputting that evidence into the places that we need to, so we will be responding to the MAC call for evidence in terms of the shortage. We responded to previous MAC work. We are feeding into the DEFRA shortage of labour, which feeds into the Home Office. The Royal College is working very much, in a no-deal situation, in terms of the mutually recognised qualifications. The vast majority of European—not just EU—colleges meet the standard they are looking at in terms of other veterinary equivalence agreements, although not all of them.

We are inputting evidence through all the avenues that we can in terms of the decisions that will be made. A new one was raised with me by the Veterinary Schools Council the other week. You may be aware that quite a large number of the students who go through our vet schools now are non-EU. They may be from America and so forth. It is quite difficult when they qualify to get a visa to stay and work, if they want to stay and work. That is another avenue to follow up.

- Q13 **Angela Smith:** That is really interesting. I understand that about 90% of the trainee vets are women as well. Finally, on that note, do you expect that veterinary surgeons will be included on the shortage occupation list when the MAC reports in spring next year? You have just said that you are making inputs.

Christine Middlemiss: Yes. Do I have an expectation? I do not know what they are thinking. As I said, we are inputting evidence through all the different avenues that we can. We are talking about food standards, with recognition in terms of the contribution to food safety, and, therefore, public health. We are talking to a broad spectrum of people about what vets deliver and their importance.

- Q14 **Angela Smith:** Is it your expert opinion that vets should be included on that list? What would your advice be?

Christine Middlemiss: My expertise is not on immigration policy, I am afraid.

Angela Smith: Yes, but you know the industry. That is the point.



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Christine Middlemiss: My expertise is that vets are of national strategic importance to food safety and public health.

Q15 **Angela Smith:** The Secretary of State told the Public Account Committee that we intend to continue using EU versions of export health certificates, even though they refer to EU regulations that will no longer apply to the UK. Can you guarantee that this will not cause problems and confusion after EU exit? It is a very technical question, which is why I read it out.

Christine Middlemiss: Certificates detail the animal health standards that support the status of that animal product for export. Those animal health standards are set out in EU law and, indeed, they are led globally by the OIE, the world animal health organisation. The withdrawal Bill and all these SIs are moving that EU legislation into UK legislation, and we are not changing that. Where we refer to EU directives, that reference will still be legal and that certificate will be legal under UK law. Our export standards remain the same and the certificates will remain legally valid.

We have been talking to third countries we export to. In a meeting through OIE, I was in Asia recently and we were very clear that the importance is about enabling as much hassle-free trade as possible while being clear that we continue to meet the standards, and that is why we are taking this approach in the first instance. We are continuing our discussions with our trading partners as we go through this process in terms of constant reassurance.

Q16 **Angela Smith:** On that basis, how many of the countries that you have spoken to have assured you that continuing to use the EU certificates will be acceptable?

Christine Middlemiss: They have not raised direct concerns. They want to continue to be informed as we go through the deal and negotiation process, and that is what we are doing. They are reassured that we are keeping in touch with them and updating them as we go through the process.

Q17 **David Simpson:** Certainly within Northern Ireland, there is a shortage of veterinary officers, so much so that one of the local universities is looking at putting in a new course for the training of veterinary officers, which sends out a signal. It takes seven years plus whatever to train. There is a job of work there to try to establish that. This was touched upon in the previous session, but some groups have voiced concern that Brexit could spark a decline in UK animal welfare standards. Have you engaged with the Government on this issue or with different groups to assure them that this will not be the case?

Christine Middlemiss: Yes, and it has come from the top. The Secretary of State has been very clear with us. There is no intention to reduce animal welfare, or indeed animal health standards, as we leave the EU, and indeed, where appropriate, we may seek to raise standards in some areas. That has very much been our approach.



Q18 David Simpson: I do not dispute the fact that we may want to raise standards on animal welfare, but we also have to take into consideration the impact that would have on farmers. I know it is right for animal welfare and I do not minimise that, but sometimes when we put in new rules and regulations there is a cost factor. There has to be a balance. Yes, the welfare of animals is vitally important, but we need to be careful about how we balance that against any more bureaucracy that is put on to farmers, especially with the tight margins in farming at the minute.

Christine Middlemiss: In the "Health and Harmony" consultation published earlier this year looking at Government funding support to farmers post-CAP, there was a whole chapter on animal health and welfare and asking people for their thoughts about how you would raise animal health and welfare standards and support and how that works.

Q19 Julian Sturdy: In the wake of the Red Tractor scandal this year, is there a greater role for veterinarians to accredit the standards of animal welfare for consumers? The scandal did not create very good press for the sector. Obviously, it damaged confidence right the way through. Do you think there is more of a role that vets can play in that?

Christine Middlemiss: It is interesting. The Red Tractor varies across the different species in terms of vet involvement in things. I am sure there are lessons that can be learned about how that works across species. In terms of Dame Glenys Stacey, we have had the interim report and we look forward to her full report. Inspection standards and assurance standards are things that she has been thinking a lot about, and how we validate them, assure them and verify them, which is important in my world in terms of trade and things, which comes back to export health certification. There is more we can do to be clear about what vet involvement in that area is, and then, from that, look at best practice and how we do it.

Q20 Julian Sturdy: You talked about variation across species and obviously there has to be some variation for obvious reasons. In what you said, do you think there is too much variation? Is there a way that that could be closed slightly to make it a bit easier to regulate?

Christine Middlemiss: We could have more consistency in terms of thinking about animal health and animal welfare risk, if that makes sense. Depending on how your business operates and how you buy and move stock and so on, you may be a relatively low animal biosecurity and animal welfare risk, and you should be able to get on and do your business while we have the evidence to support that, so there can be focus on those who are less compliant or those with more risk pathways, such as those who move a lot of sheep over a short period. I would like to see more consistency in that judgment across the species.

Q21 Chair: This is probably moving slightly beyond the veterinary side of it, but I am always interested that Red Tractor becomes a greater promotion tool through both standard of welfare and standard of hygiene. Do you



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have any ideas on how that can be achieved? I know it is beyond your remit slightly, but I do not feel that Red Tractor quite does enough.

Christine Middlemiss: It is about transparency, consistency and a systematic approach that we can describe at a high level, particularly if we look to use Red Tractor more in terms of our USP about our animal health and welfare in the international field and what it means across all species, if that makes sense, from farm to fork. I find it difficult getting my head around the different schemes. Inevitably, they have to be nuanced to different species and different business practices, but we could have more clarity, and simplify where appropriate.

Chair: That is a good answer. Thank you very much.

Q22 **Kerry McCarthy:** I would like to ask about antibiotics and the overuse issue, which you are very familiar with. You gave evidence to the Health Committee last year. You were suggesting there that some pretty good progress had been made.

Christine Middlemiss: The industry—supported by Government, but I acknowledge it has been industry coming together—has taken huge strides. Between 2013 and 2017, so four of the five years of the national Antimicrobial Resistance Strategy, they have reduced antibiotic sales by 40%, so they have gone from 62 milligrams a kilo—that is the measurement unit we use—down to 37. They have made great strides in that. However, we should not be complacent. AMR is a huge public health issue globally, so we need to do more. The strategy finishes in 2018, the end of this year, so we will shortly, along with our public health and environment colleagues, be publishing the new 20-year vision underpinned by a five-year national action plan.

Q23 **Kerry McCarthy:** Will that include targets?

Christine Middlemiss: Yes, there will be a further reduction target in it, but the broad themes in it around animals—and I am supportive of them—are reducing levels of endemic disease and preventing endemic disease. If you do that, you do not need to use antibiotics in the first place.

We are looking at more rapid and effective diagnostics, so pen-side diagnostics and things, so you specifically know what pathogen you are dealing with and, if it is a bacteria, in terms of antibiotics, which are the right antibiotics to use on that, as well as vaccine use. We use a lot of vaccines in animals, but a number of the viruses and bacteria are difficult to make vaccines for. Pharmaceutical companies investing and developing vaccines need to know there is a market for them when they have spent all that money doing that, so we need some more work around that.

Q24 **Kerry McCarthy:** Would you support a ban or severe restriction on the use in animal agriculture of some of the antibiotics that are particularly critical for human health?



Christine Middlemiss: I support stewardship and robust controls on them, but not banning them, because there are a very few select times where that is the antibiotic to use to manage that disease, to reduce the welfare impacts for that animal and, in reducing that pathogen, to stop it spreading onwards. There are some rare but specific times when those are the right antibiotics to use and we should be able to use them.

Q25 **Kerry McCarthy:** Right, so you support restrictions rather than bans. You said that it is a massive problem in other countries and that they have not got to grips with it in the way that we have.

Christine Middlemiss: A number of them have. I am not saying all the countries. Some of them have. Denmark and the Netherlands have done a really good job.

Q26 **Kerry McCarthy:** Which countries are the most difficult to persuade?

Christine Middlemiss: It is not so much about persuading; it is about having the resources and systems to make it happen. We recognise very much that in many African countries it is difficult. They do not have robust veterinary systems in the first place. Perhaps they do not have registration of animal drugs like we have, so they are starting from a really difficult place, in terms of having those systems, to then have good stewardship around antibiotic use. Our veterinary medicines director working with OIE, the world animal health organisation, is actually doing some work in some African countries—the specific ones escape me at the moment—to help support them in terms of how they devise better veterinary systems to enable some of that control to go on.

Q27 **Kerry McCarthy:** The US is obviously of great concern. I have seen some figures, though some people dispute them, that the routine use of antibiotics is five times higher in the States than in the UK. That is of particular concern as we are looking to do a post-Brexit trade deal with the US. Do you see any signs that the US is trying to get to grips with this issue?

Christine Middlemiss: The OIE, which, as I have said before, sets international standards about animal health, now has chapters on antimicrobial use, which is setting standards around surveillance and definitions for use—prophylaxis, preventative use and so on—and this is driving changes across all the nearly 200 member countries in how they prescribe. There is the Government component of that, but you have to educate and drive the changes on the ground.

Q28 **Kerry McCarthy:** Has there been any reduction in antibiotics use in the States, or is it going in the opposite direction?

Christine Middlemiss: I do not know; I do not have the figures. Some of us are visiting before the end of the year to talk about the global research work going on in antimicrobial resistance, and we will be holding an event in Washington on that, and it will be an opportunity to speak further with their officials.



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Q29 **Chair:** On the general principles of health certificates and imports and meeting those, how defensible are they on a WTO process? Are there going to be challenges? If we say, "You can only bring them in if they are produced in that way," can that be challenged?

Christine Middlemiss: We are a member of the OIE, which sets the standard but not on a legislative basis. We are very involved in the active process of how those standards are developed and agreed. Inevitably, we have done it under the EU banner to now and that is why we are strengthening our engagement to have our own voice in that. Ultimately, where countries do not follow those agreed standards, it comes to WTO to take action on them.

Q30 **Chair:** The Secretary of State and Minister George Eustice have talked about raising our welfare standards, perhaps beyond the level of the EU. What status would that then have, and can you then resist trade that has not met the higher standard to which we have raised?

Christine Middlemiss: That will depend in terms of the bilateral trade agreements we have with the different countries.

Q31 **Chair:** If there is no trade agreement in place, I imagine it would be more difficult to resist imports, or would it not?

Christine Middlemiss: If you do not have a trade agreement in place, it depends on how the tariffs system works, which I am not familiar with, but I do not necessarily think it would be more difficult.

Q32 **Chair:** It is essential that it is put in that trade agreement, is it not, especially if we are going to go for higher standards still? We could get to a situation where the product coming from the EU in the future is not meeting our standards. That is going to be an interesting one. At what stage are we going to be able to say, "Your product has not met that standard so it is not allowed in."?

Christine Middlemiss: That will depend on the nature of the relationship we have with them going forward, in terms of whether we continue to exactly follow their legislation or whether it is about equivalence of legislation or beyond.

Chair: It is probably a little bit unfair to take you into that territory.

Julian Sturdy: I just want to quickly come in on that. It is an area I am very interested in. I am not going to ask you about WTO rules and things like that, because that is unfair.

Christine Middlemiss: I am not an immigration expert or a WTO expert.

Q33 **Julian Sturdy:** Would you expect to be consulted, as the Chief Veterinary Officer, on a future trade deal, for example, with the US, on welfare grounds? I mean consulted by the Department that will be negotiating the deal? It would not be DEFRA, but rather the Department for International Trade. Would you, as Chief Veterinary Officer, expect to be consulted for your advice on welfare standards in the US compared to



welfare standards in the UK?

Christine Middlemiss: Yes. With the trade work that we do at the moment, that is how the system works.

Q34 **Chair:** How would you feed that in to make sure it gets to the top level of the trade negotiation?

Christine Middlemiss: Without going into all the detail, we have a trade team within the Animal Health and Welfare Board that feeds into DEFRA's strategic trade team that then works with DIT and so on. The CVO has a certain stature in terms of being consulted. I work very closely with the trade team, as in constantly, all the time. We have been corresponding this morning. In some ways, I am the face of the competent authority in terms of UK trade and animal health and welfare. Ministers can make their own decision, but they recognise that consulting me as the lead technical adviser will help them understand.

Q35 **Julian Sturdy:** You would give them advice?

Christine Middlemiss: Yes.

Q36 **Julian Sturdy:** Obviously it would be up to them whether they accepted that advice or declined it?

Christine Middlemiss: Yes. Trade advice, specifically on WTO and immigration, is for other people to give, but I would certainly be giving my advice within my remit in animal health and welfare to be considered in that broad context.

Q37 **Chair:** Do you also have the ability to let the Secretary of State for DEFRA know? That is the other argument we have had where the Secretary of State says, "I will really be supporting the trade deals and making sure that no food comes in that does not meet our standards." Again, can we rely on the Trade Secretary of the day to necessarily take the same concern that the DEFRA Secretary of State will take? Are you confident that the whole thing will fit together?

Christine Middlemiss: Yes, from how the system works at the moment.

Q38 **Dr Johnson:** Thinking about disease threats, at the moment we are part of the Animal Disease Notification System in the EU. When we leave the EU, what provision is in place to ensure that we have good correspondence between the EU and the UK on disease notification?

Christine Middlemiss: Currently, we notify if we have a disease outbreak, as with other member states, through the Animal Disease Notification System and we also notify the OIE within a very short period—24 hours—of something happening, and that is published across all OIE members. Again, it depends exactly on the relationship and the access to the IT systems that we have across Europe. As you know, if the deal goes ahead, we have the implementation period, we still have access and we have discussions about what future trade looks like and continued access.



The Commission recently published its contingency plan for a no-deal scenario, talking about our approval as a third country, and that is something that I will be working with them on in the next few weeks. Some third countries do have access to some of the systems, so whether that will continue or not is still being discussed. We will have access and we will know through the OIE system, because all member states get to know that, and we will know informally through the science networks and things. I hope that I would be able to continue to have the relationship with my fellow EU CVOs and technical people in the Commission and that we would still be notified, because of the way we trade and, as we noted earlier, the shared risk pathways and so forth.

- Q39 **Dr Johnson:** You say that you notify the Animal Disease Notification System and the OIE. Is that effectively duplication? If we stayed in the OIE after we left, is it necessary to be part of this European network at all, or are we essentially notifying two bodies that overlap?

Christine Middlemiss: There are some timing differences. In terms of the actual systems, there are some timing differences.

- Q40 **Dr Johnson:** What are the timing differences?

Christine Middlemiss: ADNS is more real-time and immediate, whereas there is more of a lag with the OIE, in terms of hours rather than days or weeks.

- Q41 **Dr Johnson:** Basically, they are two overlapping systems with slightly different groups of countries. In the worst-case scenario where we had no agreement with Europe on it, it would make a difference of a few hours?

Christine Middlemiss: Yes.

- Q42 **Dr Johnson:** Do you feel confident that the risk of disease in the UK is not significantly changed whether we end up with an agreement or not?

Christine Middlemiss: The risk of disease is about the different risk pathways we have, and that is effectively based on how much trade we have with the EU and what sort of trade it is, as well as alignment in terms of the standards and protocols and, therefore, certifications and things, as we have talked about already. Other than welfare, whether we have the same legislation or we have equivalence, we will still have, in animal health terms, similar standards, because we trade so much together and because of the kinds of thing we trade.

- Q43 **Dr Johnson:** In terms of disease surveillance notification—so finding out about the diseases that we need to watch out for, such as the avian flu and putting in specific quarantine procedures—you are saying that the delay, if any, in finding that out would be a matter of hours?

Christine Middlemiss: Yes. You know that a country has disease. You then look at what we have got in from that country in a period. Depending on the disease, is it a few days or a few weeks? You then go



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back and check. That links back to whether we still have access to TRACES. If we do not, we are building our own import notification system, which will enable us to say what product or animals came in from what country over what period and, most importantly, where have they gone to.

Q44 **Dr Johnson:** Do you feel quite confident that you can protect the health of the British animals?

Christine Middlemiss: Yes, within the same level, within the current system.

Dr Johnson: At the current standard, yes?

Christine Middlemiss: Yes, I am confident it is not going to reduce.

Q45 **Chair:** If we were to come out of the EU without a deal, and we are treated as a third-country trader, theoretically, a lot of the problems that the EU has in agreeing third-country trading are on standards. As we leave, we are of exactly the same standard. Theoretically, it should not be a problem to get an agreement with the EU on third-country status. It is about whether, politically or for other reasons, there could be problems. Is that your assessment, without leading you too far?

Christine Middlemiss: Standards should be a technical discussion. We already have equivalence of standards, so I hope the discussion is more about how we provide them with further evidence that they need and them being able to assess that in an appropriate way so that we can agree the status.

Q46 **Chair:** Rather than debate about the standards themselves?

Christine Middlemiss: Yes.

Q47 **Chair:** We will finish on a non-controversial question. Before I ask you about the extension to the licensing of the badger cull, a report was recently released regarding the effectiveness of the badger cull that was probably slightly open to interpretation on both sides. What is your assessment, as chief vet, of what that assessment has actually said so far?

Christine Middlemiss: The report released was on the first two areas—Gloucestershire and Somerset—and the first two years, and it has shown a reduction in the incidence of disease in cattle in those areas since the cull began. Farms change hands and so on, but, all things being the same, it said that we have seen a reduction in incidence of disease, and that is a fair assessment.

We have data for four years of those areas, because they are now further on, and that is going through peer review and will be published in due course.

Q48 **Chair:** When do you expect that to be published? Do you have any idea?



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Christine Middlemiss: I have been chasing it. It is in a peer review process at the moment and I do not have a firm date on it. That will give us more robust evidence to be able to show that.

Q49 **Chair:** As the report stood, it did show a reduction in TB in cattle?

Christine Middlemiss: In the incidence of TB in those areas.

Q50 **Chair:** I will park it there without getting too controversial here today. The actual question is this: an extension to the licence of the badger cull was announced in September. Are you satisfied that this is a good use of resource?

Christine Middlemiss: An extension in terms of what?

Chair: I imagine what it means is that we are rolling it out to more areas all of the time.

Christine Middlemiss: Yes, we did an additional 10 areas this year.

Q51 **Chair:** Is it a good use of resource to cull badgers? I suppose that is the simple question.

Christine Middlemiss: As we know, badgers are involved in a cycle of TB and reinfection in cattle, but they are not the only reason that cattle are infected. It is reasonable to take disease control measures in regards to badgers, but we also need robust disease control.

Chair: Movement restrictions and testing?

Christine Middlemiss: Exactly. The Godfray report, which was published recently, gives great insight into how we can strengthen other measures; it also talks about the next stages in the cull—particularly around surveillance, so reducing hidden infection. When I say “hidden”, I do not mean purposely hidden; I mean it is a very clever pathogen and it hides itself in the system. We can do more effective testing in that. They were very struck by the number of cattle movements; there were 1.7 million movements in England not to slaughter in a year. What does that do for disease spread and so on?

Chair: We are also changing some of the systems. Some of it is skin tests with cattle and now you are doing other tests.

Christine Middlemiss: Yes, we have been doing gamma testing for a while, but, even still, there are ways you can use those in combination and there are some other tests in development. There is no one perfect test.

Q52 **Chair:** Is there a blood test? I met some vets once who are still testing as to whether they can test TB from the blood.

Christine Middlemiss: There is a validated one, which meets the OIE standards, of gamma testing. Some of the pushback or discomfort that vets and farmers have about that is that it can detect false positives. It detects changes in the immune system and it has a small level—around



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3%—of false positives that it can detect. However, equally well, it is sensitive in that, compared to the standard skin test, it picks up that animals are infected at certain stages that a skin test does not. One of the recommendations in Godfray is about using the tests more in combination, so that you are picking up different disease response scenarios across the immune system.

Q53 Chair: Having previously been a dairy farmer myself and having TB tests, the issue is to try to find the cattle that are suffering from TB very quickly.

Christine Middlemiss: Yes, partly because of their suffering, but also because they are a risk to other cattle being infected.

Q54 Chair: Yes, because they are then infecting other cattle. The issue is to make sure that the test itself is accurate and that you are not taking out cattle that do not have TB. That is where the farming fraternity, with the science side of it, are not altogether totally in agreement. How do you assess that?

Christine Middlemiss: The tests are complicated. It is a difficult bug. It is walled off in the system. Our tests rely on measuring response in the immune system, and it is not "red, yes" or "black, no". There is a scale of reaction, so the difficulty in testing is about where you are on that scale and interpreting that. It is a good herd-level test to think, "Do we have disease infection in this herd?" but it gets more difficult when you get to the individual animal and testing immune responses of individual animals. It partly depends on whether you want to be cautionary and say, "This animal might potentially be infected and we should remove it, so it does not spread infection," or be less cautionary and say, "Well, it is not strongly infected so we might leave it."

Chair: Yes, that is right because it is then about whether that is infectious to other cattle.

Christine Middlemiss: Absolutely.

Angela Smith: I just have a quick question. I am talking nationally now, Christine.

Christine Middlemiss: Do you mean nationally in terms of England?

Q55 Angela Smith: In England, has the incidence of TB in cattle increased or decreased in the last five years?

Christine Middlemiss: It has pretty much plateaued out, to be honest, and that is partly because we have upped our surveillance and our testing. In the edge area, for example, we are now testing every six months and we are finding more disease. That is not necessarily that there is more infection; it is that we are testing more often, so we are finding these immune system changes that indicate infection, which we previously might not have picked up so quickly. For example, if we only tested every year, we were probably finding the same number of animals,



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but instead of testing every year and finding them over two or three years we are testing every six months and finding them quicker, so that contributes to not having an increase or decrease.

Q56 Angela Smith: All the evidence from the RBCT was that, although there is a reduction in incidence in the culling area, the edge area actually often sees an increase, because badgers move out of the culling area. This is one of the arguments against culling. Is it going to be possible to separate out changes in testing procedures from the reality of what is happening on the ground?

Christine Middlemiss: You are absolutely right. Because policy is evolving and measures are changing to get ahead of the disease, you are not comparing apples and apples year on year. You are changing it.

Angela Smith: That therefore means that it will be very difficult in some ways to test the effectiveness of culling as a tool.

Christine Middlemiss: Yes, as a stand-alone tool, because you are also taking these other measures and they are changing.

Q57 Chair: It is not a stand-alone tool, is it? That is the issue.

Christine Middlemiss: No, exactly.

Angela Smith: It is in terms of the decision as to whether to continue or not.

Chair: Angela, I am sorry to disagree with you but, if you are in an area where you have massive amounts of TB and you cannot eradicate it from the cattle and you have it in the badgers, it is bound to be an issue. I am sorry. We are not going to agree on it. Also, from the perturbation point of view, the more you create, the bigger the cull area, and the more the cull areas join up, the larger area you have in the middle and less perturbation on the edges because of the sheer scale of it. Until we get to scale, which we are beginning to get to now, I am not convinced we will see the results anyway.

Angela Smith: The Chair is beginning to give evidence to the Committee. I am sorry, Chair; that is out of order.

Chair: It is one of these issues where I declare immediately that I have very strong views. I am not apologising for holding those, Angela.

Christine Middlemiss: The report that we referred to, which indicates the reduction, as far as possible tried to compare apples and apples. However, as we have more culls and as we consider the Godfray options and take further action, we want to eradicate and we want to minimise the impact of this disease as quickly as we possibly can, so you may, to a degree, sacrifice the comparative approach you get, because you leave everything else the same and you only do one thing. We are trying to do lots of effective things to try to reduce the level of disease.

Q58 Angela Smith: The Godfray report also established that TB is prevalent



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in a number of wildlife populations, which again changes the evidence base in terms of whether or not culling is effective. What is going to be the public's response to that?

Christine Middlemiss: It depends whether the animals are dead-end hosts or whether they spread infection back into cattle. We know that happens with badgers. We see it through spoligotyping and, interestingly, we are now using whole-genome sequencing in some areas so it really looks at the genetic make-up of the TB, which changes with each infection. It is like a jigsaw puzzle, and you can put different bits together and develop a route map and say, "It must have been here, and it changed that much so it must have gone there," and that will help us enormously in linking up cattle-to-badger and badger-to-cattle and cattle-to-cattle spread.

Q59 **Angela Smith:** Is the Department going to invest sufficiently in establishing a comprehensive picture on that aspect of disease control? That has always been at the heart of it. We have never known enough about the problem. We have never known enough about how the disease is spread.

Christine Middlemiss: We used whole-genome sequencing in Cumbria. That was the first time, other than just testing it out and validating. It is now being spread out nationally, and I am very excited about it because it will really help that evidence base.

Q60 **Angela Smith:** Are you sufficiently resourced to do that work?

Christine Middlemiss: Yes. As they have done more of it, the cost of it has come down. It is not a test to see if there is disease; it is retrospective, once they have disease, but in terms of helping us understand those key things and where to target controls and things, it is a necessary investment.

Q61 **Angela Smith:** Can we look forward to a report on the findings in relation to this and the nature and incidence in terms of how the disease spreads?

Christine Middlemiss: I am sure it is something that our TB scientists are working on and will look forward to doing in due course when they have the resource time to put a paper together.

Q62 **Chair:** We await with interest. I just have a very final question. It is quite a hard one but give a straightforward answer. Has DEFRA misled the veterinary profession over the effectiveness of culling as a preventive measure against TB in cattle?

Christine Middlemiss: No, I do not think we have misled them. We are pretty transparent and good at sharing the information that we have, and I absolutely support continuing to do that. The more evidence that we are able to share publicly with stakeholders, the better, so that we are all working from the same basis.



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Q63 **Chair:** What you have said here today is that there is a great deal of complexity within the disease and how we report it. Naturally, when you get a report, both sides of the argument can probably pick out things and sometimes they get blown out of all proportion. I do not know whether perhaps, from the release of the information, DEFRA has learned anything from how it is released or whatever.

Christine Middlemiss: It is difficult. Do you save it all up and make it look like you are not releasing anything until you have enough that you can make a really robust picture, or do you share what you have in instalments, about which you inevitably get questioned but that is being transparent? Personally, I support sharing what we have at the time to help build that picture, so that everybody has access to that, but inevitably, as you know, it can be interpreted in different ways.

Chair: Thank you very much for very straightforward answers on what is quite a thorny issue. Thank you very much, and thank you generally for very good evidence this morning and being so open and frank with us. We will release you now. Thank you very much.