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**Date: 12.10.17**

**Comments:**

**Duration: 70.22**

**KEY:**

Cannot decipher = (unclear + time code)

Sounds like = [s.l + time code]

**I: = Interviewer (Interviewer in bold)**

A: = Participant 1

B: = Participant 2.

[…] = redacted for data protection purposes

I: So, for the benefit of the recording, could you both introduce yourself?

A: Yes, […]

B: […]

I: Thank you. So, maybe we could just start with you just introducing a little about the organisation and how AMR has arisen as an issue for you in the last few years and how it has evolved?

A: If I give you a bit of background to the organisation and B can come in with the details of the AMR antibiotics.

[…]

I: The commission as in the EU commission**?**

B: The EU commission, they started back in 2013 doing annual surveys, pigs, poultry and cattle and in 2016, so it’s alternate years, so 2016 was poultry, meat, well 2014 but 2016, they also included the SBL’s. Now we don’t know the results of that survey yet. We’re expecting the results to be published in the EMD Farms Report at the end of this month or early November.

I: So, does that cover the country or will it average out for the whole of Europe?

B: Well it will be the UK, what they found from the UK samples and those are samples taken at the slaughter house for salmonella and (unclear 00:06:15) but because is mandatory, all other member states they have to provide their information as well, so we would be able to compare it to other member states.

I: Do other member states collect data in the same way? So, is it all completely comparable?

B: There is a protocol which is part of regulations, so its quite clear that everyone has to follow the same protocol. So, they are all testing, using the same methods and analysing, using the same methods, in an approved laboratory.

I: Is that in other species or just in poultry that its been harmonised?

B: It’s been harmonised for all the species. It has to be because otherwise you can’t compare like with like, it has to be the same protocol, so everyone is following the same protocol.

I: So, how does it work, is it random animals that are tested at the slaughter house?

B: It is random, certainly on the poultry side and I’m assuming it’s the same on the pigs and cattle. They take the slaughter houses with the highest through-put. So, they won’t take slaughter houses that slaughter small volumes, they’ll take the ones with the highest through-put.

A: They are weighting it as well.

[…]

I: So, I guess perhaps stepping back a bit to the things we started with, can you tell me a little about […] so from that only a short bit of research you did, how your policies have developed and how that works in consultation with your members, because I’m sure you have to manage quite a lot (unclear 00:08:44) as to what needs to be done and who should be doing it, within that system?

A: I think remarkably, I think this topic has taken hold across the membership as something we need to act upon. So, I think relatively straightforward to set up directions, set up measures to be taken. Having said that, the measures that we’ve taken so far have been relatively straightforward. It is the measuring, essentially, measuring, recording and collating that data –

I: So, measuring what?

A: Antibiotic use.

I: Why is it described as what?

A: We are moving onto why, aren’t we? To collecting what? We rationalise, but before critical import to market. Everybody has to submit a reason for the critically important antibiotics, if they’re used, they have to send a written report as to why?

I: But, as yet, not for other antibiotics?

A: Not for other antibiotics.

[…]

B: So, a lot of the stewardship now is about knowledge transfer. The sharing ideas of what worked, didn’t work, because everybody has now stopped prophylactic use since last year. Everyone started at a different position, so some started very early on, others who were probably under less pressure from the retailers, because that’s not their market, started a little bit … but by the end of 2016, everyone had stopped. So, whether they started in January or finished in September –

A: I think that’s really important to emphasis that over that four-year period, so 2012 to 2016, everybody started in different places but and I’m not understating the work that’s gone into this, but measures to reduce use amounted a lot to, just don’t use it or try to not use it and seeing what happened or what, if there were alternatives and a lot of it did come down to vets changing their practices. Just saying, “Normally I’d give it here, lets wait a day,” so that sort of approach.

It sounds simple: just don’t use it. But the involvement, what’s involved in making those sorts of decisions was huge in terms of the vets, the companies, the commercial implications but now, as I said, we’re really getting into a point where everybody is at the same position now. No prophylactic use, there are limits on certain critically important we actually banned early on, like having [s.l. sporings 00:13:29].

So, yes, we are at a point where knowledge transfer is the thing and that’s both in terms of techniques that reduce or replace and also antimicrobials, antibiotic resistance points in our part of the supply chain. Where they occur, what they are because we’ve got some evidence, antimicrobial resistance, antibiotic resistance for antibiotics that we don’t use.

So, we started to tease out little problems, quirks like that and so we now need to know whether resistance is actually occurring, it’s triggered by something we’re doing, where it occurs, is it transferred, does it –

I: So, what are the plans being put in place to allow that to happen?

A: This is a really … as much as we’ve made a massive start, it is just a start.

I: Yes, because it is so complex.

A: But we have to look at it as, yes, we are part of a much bigger chain but the only thing we can do is our bit of the chain. So, we’ve got start looking at that. So, really, it’s a continued work between companies, vets to identify areas of interest, looking at where resistance may or may not occur. If it does occur, what’s the lifecycle of resistance? Does it fade away without using antibiotics, does it not, how does it travel?

[…]

B**:** it’s wanting to see a reduction in the use of antibiotics. So, we’ve been quite clear that we are looking at antibiotic reduction because antimicrobials are used but there are certain antimicrobials, yes, they do have an element of antibiotic in there, perhaps antibiotic resistance but we’re just talking about antibiotics. […]

So, we’re probably one of the easier sectors to work with because everything is a short supply chain. So, it was that bit easier for the companies to speak to the vets, speak to the farmers to get them to change their behaviour. It’s a little bit different when you’ve got a contract grower, contract farmer whose livelihood depends on selling those birds to a processor and convincing them, look just wait and see but obviously the vet has a duty of care over those birds, as does the keeper. So, you can only wait so long but then you do actually need to go in and treat.

I: Can farmers see through your data where they sit, compared to other people?

B: They do … we don’t do that as an organisation but internally they will do that. The companies will do their own benchmarking. They’ll do their own benchmarking for a lot of different things and one would be antibiotic use.

Farmer ‘A’ is using so much, farmer ‘B’ is using maybe a bit less or a bit more. Why? Why is he using more? If it’s the exact same farm, not the exact same farm but the same number of sheds, the same day-old chicks are going in there, feeding the same feed, why are they different? So, they do that internally, we do not have a league table.

A: No because this is not about getting to zero.

I: No, I just wondered whether, I don’t know, everyone had their own code number and they could find themselves in a list.

A: Right, that would make more sense, they could do a comparison and that.

I: So, is the data that’s used … […]. Are there different problems in different parts of the industry?

B: Yes, I mean turkeys have traditionally probably used more antibiotics but then (a) it’s a bigger bird and it’s got a longer lifecycle. So, it lives up to three, four times longer than a chicken. So, you know, you probably will end up treating them at some point in time because of the lifecycle.

I: They actually like it warm as well, don’t they?

B: There are a limited number of antibiotics that turkeys would respond to. Unfortunately, one of the antibiotics they do respond well to is one of the critically important ones. So, that has been addressed as to, can we find a way around –

A: And turkeys generally are not as resilient.

B: The best really out of all of them, are the ducks. They just seem to be … but ducks have even fewer product lines that you can use in ducks and so what they do have is they’re just hardier, they just seem to be more resistant to everything. So, they are that bit harder but it’s a different type of production system. You’ve got lower volume anyway, you’ve got 16 million ducks compared to almost 1 billion chickens and there are 16 million turkeys […] and geese are very much seasonal, again, we don’t collect usage data from that.

I: From geese?

B: No because there’s very few reared anyway.

A: And they’re hardy.

B: They’re hardy but again, they will call the vet in if need be but coming back to, in terms of antibiotic resistance, we’ve only done that one piece of work because to go and do any sort of resistance monitoring, where do you start? What bacteria do you sample for?

I: Is there research you would like to be done if money was no object?

[…]

B: We’d probably find a little more about resistance patterns but that’s not something the industry would be able to … I mean that’s for research. So, I think what’s been done is sufficient because I think for individual companies to do their monitoring, again what do you look for? And there’s so many different connections you could look at and then if you find it, what do you do then?

So, we are trying to find, A mentioned, you know, taking out fluoroquinolones, for example, even though another product had been used because it’s there in the environment, it’s stuck here and it’s not going to change back to its original format.

A: It, campylobacter, it’s quite prevalent in poultry.

I: It’s reduced a lot.

A: It has reduced a lot but campylobacter is still probably the bacteria that you would say, if you wanted to try and measure resistance, you’d go looking for campylobacter because you’re likely to find it and then you look for resistance in in but the challenge that provides is that its (1) it’s genetically mobile, itself, campylobacter it changes at a drop of a hat and (2) it only develops certain resistant to certain things, the fluoroquinolone for instance, it doesn’t suffer from having that resistance.

B: So, it doesn’t revert back to…I don’t know, I’m not that technical but there’s no reason for it to change because it’s not being challenged. So, if it’s not being challenged, why?

A: Again, we don’t know whether that resistance is due to historical exposure to the antibiotic or that resistance to that particular antibiotic is just an accident of other environmental pressures. So, where do you start in that but in terms of the wider supply chain, you’re probably just starting to look at in terms of if you could stop, for example, campylobacter, if you could eliminate campylobacter, you, by default you wouldn’t find any resistance.

That’s not possible but the control points throughout the chain, there are no control points throughout the chain, so perhaps if you’re looking at points in the supply chain to perhaps look at where data may be collected or there is a potential for it to be collected, they probably equate to the same control points that are in place for microbial control.

I: So, I guess that point about campylobacter links back to the O’Neill things about the pharmaceutical industry and their structure, so to have economic changes that, as such, push for vaccines and those kinds of things. Do you think it’s ever going to happen and could you see how it could happen?

A: No and it depends on the campylobacter, for example, we’ve been working on that since 2006, something like that and –

B: No, before that.

A: Yes, for that entire time, pharmaceutical companies have said, vaccines are five years away.

I: Someone else told me that the veterinary pharmaceutical and the human pharmaceutical companies are different companies, is that right?

A: They’re different parts of the same company. Yes, they’re often run as different entities but they’re all within the big contracts.

So, if it were easy, then they would have done it by now because this, as I say, it’s the last ten years with campylobacter, that’s the period where they could have made money, seriously made money, if it was possible. Now, when other controls are in place, there’s less potential for…right at the beginning they’d come up and say, “Oh here’s a vaccine, it works,” everyone would have been fantastic, brilliant, we’ll buy in that, go. Now they’re not going to see those sorts of returns, even if they came up with a vaccine.

So, no, I don’t think there’s a pharmaceutical solution.

[…]

I: So, this doesn’t that includes seasonal workers, this is people higher up in the organisation?

A: It includes all workers. Seasonal workers, probably a little bit different how they would be treated but they would still be encouraged to have qualifications.

I: That’s an awful lot of people**.**

A: Yes, there are certain…I mean on the farming side, the poultry passport at the moment you’ve got about 4,600 people.

B: It’s mandatory now, so you have to…so even for seasonal workers, within a period of time, they have to have signed up.

A: There are short courses, like the first aid, health and safety, all those things, they can be done by anybody because they are just over two days.

B: Yes, they go through a –

A: And then there’s the longer qualifications, so the Level 2 that you do over a period of two years, I think it is. So, even seasonal workers can do the short courses and start working. […]

B: So, it’s whether a seasonal worker or a new employee, nobody is allowed into the shed or birds until they’ve done some sort of induction on welfare, health and safety and bio-security. That is –

I: How long has that been in place?

A: I mean that is part of that, it’s been seven or eight years.

I: Okay. I grew up in North Lincolnshire where there’s a lot of chicken farms. It was a school holiday job basically, at the time.

A: And it’s not that anymore. There really is the system in place, so as B says, all the people who have contact with the live birds, have that level of knowledge, understanding, application to work with.

So, you are dealing with qualified people, competent people because competence is the –

I: Particularly in terms of diagnosis and in that case, you start to spot problem earlier because you know.

A: Definitely, I think you speak to anybody, any of the many farmers and they get a feel for it, whether that’s the noise or the attitude or the movement of the birds. There are indications that experienced people can spot.

I: So, I guess … how long have we got, actually?

A: You can carry on.

I: Thinking about the focus of the research, and what you do and how you do it. In terms of retailers, specifically I’m thinking of the ‘big ten’ but also the smaller ones, are there things that they could be doing, should be doing, or are well placed to do that you are aware of? Are they putting pressures on things that are actually problematic from a farming sense of things?

A: they’re starting to get involved, there’s more interest in the subject but what I think the problem I think they’ve faced so far, is what can they do? What is it possible because are there … when it’s them and consumers, right next to consumers, they’re going to be very sensitive, are they saying there is a problem with the antibiotic resistance in food, are they saying that antibiotic, not antibiotic, residues are in all food could cause a problem?

No of course they’re not but they don’t want to give that impression to consumers because we don’t know and that’s where you’re coming in with this research, but we don’t know. So, there’s actually very limited actions that retailers can really take.

What they can do and we’re starting to see some retailers work with the production level of their supply chains to say, well can we reduce, or can you cut these out or is it possible to start to put … instead of it being for us, instead of it being just the poultry sector guidance, if you like, I think it will extend to being, to start to include retailers. So, that producers have an agreement with and it shouldn’t be, you must not use ‘X’ I think it will reflect the position […] brought us to, in that it has to be a last resort, some things have to be a last resort, but they have to be available.

So, I don’t think there’s any appetite in the retail sector to the prescriptive yet but then there’s not an issue or a problem clearly identified. We don’t know … we all think that there is the potential for a small crossover, we know that, there’s enough science out there to suggest that it’s possible, a crossover between resistance through a food chain, very small, that’s the indication at the moment but because it’s very small, we don’t know, in the retail level, they just don’t know what to do.

I: Okay, and I was thinking that its something to do, if some of the research suggests that this style of housing is much better… but then obviously there’s the cost of implementing that and if people are putting pressure on prices, then it just doesn’t work, does it?

A: No but because we’ve had such success in reducing the amount of antibiotics used it makes it less simple to identify big areas, like big changes.

I: So, are there lessons for other parts of the industry, […] on what you’ve done and where you’ve done it, that they are not doing, and they could or are they just so different that actually what you’ve done wouldn’t work for them?

B: I think it’s just our whole approach to it, its management, it’s training, its housing. Yes, housing plays a big role, its bio-security, it’s hygiene, its knowing where your stock comes from which is probably much easier in […our…] industry to know […] you don’t get that in other sectors.

A: It’s the limited number of dedicated vets in the sector. They are able to work together.

I: So, they just work on [..your sector…] then?

B: They work on […our sector] and they work together. They do compete with each other obviously because the […] industry is getting smaller, because of buy-out and the number of companies getting smaller, so probably I suppose they are competing for a fewer number of clients, but they do work together.

So, they are a big part of the stewardship because we had to have the vets around the table and the companies see their vet an awful lot more often, so it’s not like a hill farmer who might call to see the vet once a year, they see their vet a lot.

A: And it’s that, the vet company relationship has changed as well, not just because the vets knew they wanted to do something about this but also things like the buying practices in other sectors, so hill farming is probably a good example that the vet sells the antibiotics in the poultry sector, the company will buy the antibiotics, the vet only prescribes it.

So, it’s not a commercial incentive for vets to –

I: Yes, and the company would rather not be spending money if they didn’t have to?

A: Yes.

I: Yes, okay.

A: Don’t underestimate the commercial side of things because this and other subjects, things like the sustainability and usage or anything like that, there’s a cost. There’s a production cost in using antibiotics, there’s a production cost using wash, whatever. So, they are going to do as much as they can to minimise the cost of production.

There’s a balance there obviously because if you don’t use antibiotics when you need to, then there’s a cost the other way but ultimately, they’re buying a product and you put it in the business context and it can take hold. Otherwise it continues to be an abstract concept, antibiotic, well yes, we should do that, once it becomes a bottom line, think I’m spending this much on it, do I need to spend this much on it? It changes perspectives, but it is about people, it is about often small groups of people, deciding to make changes and that’s really important because we’ve been able to do that because we have those chains.

Other sectors are more (unclear 00:37:10) and it’s very difficult to get people together to make that change.

B: But they are, they are bringing them together, through the target taskforce, they are bringing them together and things, there you are probably going to see the biggest behavioural change, but we started in 2011 and a lot of the sectors have only started in maybe the last year or two. So, we’re so much further down the road.

I: But still in a very short space of time.

A: Yes, in the scheme of things, yes.

B: But if we come to and its only on chickens, we’ve come to, I think, a place where we think this is where we are. As ‘A’ said, this is a not a race to zero, we have to be able to use antibiotics to treat birds.

I: Do you think this, because I’ve read the stuff from some US pressure groups about antibiotic free, do so you see any things about that in the UK, do you think it is going to become an issue?

B: I think you need to very careful about what you read about the antibiotic free –

I: Well yes because obviously even in organic systems, they are allowed antibiotics, but I see stuff about labelling, obviously it’s not in the meat at all but that its come from antibiotic free farming.

A: That’s never been used, and I think there’s dangers there because us, probably not the US, because of our reduction, [in our sector] we are seeing a lot of […] that never get treated with antibiotics and that’s where in the US, they’ve decided to make a selling point of that, for one reason or another. It doesn’t mean that there aren’t lines that do use antibiotics, I get the feeling its more a case of, we’ve got through this […cycle…] without using antibiotics, it can go into the antibiotics free line, rather than a –

I: It’s just a different narrative to the responsible use?

A: Yes.

I: There just seems to be very different approaches.

B: Yes, it’s a point of unique selling point.

I: So, rather than the UK, well its being competitive, it’s actually becoming a competitive issue for the markets.

B: It is but I think you have to look at, it’s a different system of production in the States, they’ve also got different market outlets and so if you look, [..for example at poultry…] not every flock is not treated, not not treated, so it’s only a percentage of flocks that are not treated that will go into certain markets. Everything else there is an outlet, there is no other outlet here, everything goes … well the majority of poultry meat goes into the retail sector.

So, I think you need to read between the lines because a brand might say, never used antibiotics, antibiotic free but they may have other brands, they may have other lines where they do use antibiotics because they can push that. So, I think you need to look then at the stocking density, you need to look at the mortality, so I think t here’s an awful lot around … I thinks it a very, very dangerous place to go because I think you are pushing on the boundaries of a duty of care for your birds.

But like ‘A’ said, is absolutely right, we’ll see more and more flocks that are not being treated but if we … there was a lot of rainfall this autumn, before the harvest, we have to see what that harvest produces. If that harvest was like it was in 2013 when we saw a spike in usage, we could see that usage go up because if the dives and the nutrition is not right then that will affect the health and welfare of the bird.

A: We’ve had a good few years, haven’t we?

B: We’ve had really, really good harvests. Good feed quality.

I: And presumably the figures (unclear 00:41:24) every year, they’re not going to … because obviously it will vary, there will be spikes and there will be troughs. So, in terms of the data about use?

B: We haven’t actually broken our data down into a seasonal but we have seen, I think in terms of campylobacter, we have seen a seasonal fluctuation and I think the way we collect our data, we just collect 12 months, we also do it quarterly, so we could actually see, on checking our quarterly, we could see some variation there, going forward but I mean the harvest is now in, so really from now on, we have been very, very fortunate that the harvest has been good and that’s the best it can be if we do years.

A: Chicks have been good, weather has been good, harvest has been good, we’ve been lucky. We’ve had a lucky few years because it only takes one of those to send it the other way which is why … what was our last report, we were 17 kilograms per PCU for chicken and the target we’re talking about with rumour is going to be about the 25 kilograms.

So, we think we’re under the … but we think there’s a risk of it rising again, if one of those factors changes.

I: Is climate change an issue with that then? So more wet (unclear 00:42:49)?

A: Yes. Climate, weather is a factor.

I: Yes, I hadn’t realised in terms of harvesting feed. Just to clarify actually, […], are you up to the abattoir or do you include processers?

A: Include processors, they’re integrated companies, so the same company will the farmers and slaughtering process.

I: Okay, so you stop at the end of the processing?

A: Yes. The retail pack essentially and our members sell to the retailers, so they pack for the retailers.

B: Yes, we started the talk with the primary breeders and they’re the ones where, beginning of 2012, they agreed to a ban on Cephalosporins, third and fourth generation and so that obviously had a knock-on effect of the pay of breeding stock and then the day-old chicks going onto to the broil farms but there still being that steady decline.

So, it’s right from the top but the primary breeders use very few anyway, certainly not in the pedigree programmes, but they did use third and fourth generation Cephalosporins but they’re all gone.

I: So, in terms of, I’m just thinking about the whole chain, so are there other changes and I guess it links more to stuff like campylobacter as opposed to AMR specifically but have there been changes in other elements in terms of the way birds are transported or the way that meat is transported that are relevant to anything or is it all to do with the amount of use and making a farm care?

A: When you look at something like campylobacter and you can also see it in salmonella to a certain extent, you do get circulation around a company system. So, in terms of the transport crate modules then you can see that transfer for campylobacter from the farm, slaughter house, back to the farm, there are company specific routes. So, by extension, if you’re talking about bacterial resistance, then yes you might see that same route. In terms of carrying, say campylobacter, in terms of carrying campylobacter through the chain, once you’re at the slaughter house, so you can see it on machinery, it can get –

I: On where?

A: So, machinery, modules, kit, through to the slaughter house but that side of it tends to stop about there and then any campylobacter that carries on into the chains, generally within the bird. So, that’s the carriage event through the system, which is why then interventions in the slaughter house to reduce campylobacter later on in the process. So, by that extension, there may be some transmission of resistant bacteria.

I: So, one of our advisors is an engineer who works on materials and also different methods of cleaning, and he’s been doing some research around what - obviously I’m not a scientist - what microbes cling to and removing them without killing, and I just wondered if there had been any changes in practices?

B: There’s been changes in urine, if you’re talking about urine, there’s certainly been changes at the hatchery.

A: Yes, there have, purely focused on the control of campylobacter. At farm level, campylobacter control is all about not letting it in in the first place, is it there or it’s not, the longer you can keep it out, the better.

I: So, what carries it?

A: It is naturally occurring, it does get carried on wild birds, whatever. So, it can get carried in on feet, it can get carried in on equipment and yet again if you’ve got feeder lines or water lines that are not completely cleaned, can occur in those. So, the routes of transmission, its very, very difficult to pin down and say that is the way campylobacter gets in because it is so prevalent in the environment.

To add onto that, circulation within the company but then you move into the processing, slaughter of processing, yes, we’ve had a lot of effort put into things like new crates and modules for the transport of birds, new materials, new way of handling, new ways of washing, different approaches to the various stages of equipment through the process and most companies now have one or two interventions in the line. Normally based around either a heat or a cold treatment to control campylobacter, to reduce the prevalence of campylobacter.

The result has been, over the years and the result across the chain has been that we’re slowly seeing fewer farms go positive for campylobacter, slowly but that is a really slow burner. So, increased bio-security and continual application of bio-security, that will marry our systems, from the change of clothes, the shed specific equipment because I think it will take … once campylobacter is on the site, it’s probably going to take a long time for it to get off the site because it’s the environment, it’s in wildlife.

If you look at the data, one of the spikes of people who get campylobacter infections, is winter but in the slaughter house it’s about reducing, so you are looking at techniques that is heat or cold to blast them but then, campylobacter, you find is one of these things where, if you’ve got a lot of it, it’s relatively easy to get rid of the top level, if you like, the bulk of it. What’s the difficult bit is the tail of it, so you are always left with something.

Chicken skin is a perfect environment for campylobacter. If you look at it on the microscopic level, it’s full of things that microbes can live in, essentially. So, you can get rid of the huge bulk of it but –

I: So, that’s why you’re not meant to wash chickens?

A: Because you can spread campylobacter around, yes. That’s exactly right. So, we’re hoping that the continual application at farm level, will generally reduce the number of flocks and lower the prevalence of it. So, by the time it comes to the slaughter house, the interventions actually have more effect on the lower levels, rather than just getting rid of a swathe at the top.

I: So, presumably that’s something that, because of the integration of the industry, that’s been much easier for them because no-one is expecting somebody else to do it, because it’s the same company?

A: Yes. So, yes there’s a working chain there. So, yes and that’s why you can probably piggy back antibiotic resistance onto that process because there is a process in place there and we do micro-biological monitoring anyway, as part of food safety. So, there are steps there that you can plug into, if you like.

Past that, once it’s packed, there have been some attempts at novel packaging in terms of controlling campylobacter and also you might see in supermarkets, cook in the bag chickens where people don’t have to actually touch the bird.

I: Yes, I can see the value, but it also makes me sad, as a chef. It’s like losing touch with what your food is.

B: Because you’re not touching the food, which is all part of the cooking process but for people who don’t like touching food –

I: But also, they have to know it’s an animal.

A: Not even for that element of it but we’ve seen a massive increase in convenience foods. Just cook, in the oven, take the film off, in the oven, in the foil tray, job done. I’m a fan, I’m on the other side. I like the output of food.

I: Touch it, smell it, feel it.

A: But these are all interventions that are aimed at controlling both campylobacter itself and the contact with campylobacter but past that packaging stage, I don’t know that there are really retailers, companies, retailers that do campylobacter testing packs. So, there’s a regime in place there to test for campylobacter on packs, in packs but that’s the only thing that’s actually done at a retail level, there’s nothing else you can do.

Once it’s in the pack on the shelf, nothing … I’ve haven’t said this to anyone but remember whatever is on the shelf has never been tested because you don’t, you sample as you go through the chain. So, if you’re buying something on the shelf, it’s never been tested, so you don’t know whether that has got campylobacter in or not.

I: You’re not going to eat chicken raw, though are you?

A: No, you’re not going to go round eating chicken raw. You hope not.

I: Just one quick question. A few people have talked to me about carcass balance in terms of British chicken and actually because of breast obsession, they were importing a lot of meat when actually there’s a lot of meat we don’t want, is there something retailers could perhaps do there?

A: If people started eating more dark meat, it would be brilliant, it would be absolutely brilliant.

I: Do you have any thoughts on how, in terms of … as somebody who does eat dark meat because it has the flavour in it, I don’t understand this weird obsession with breast meat.

A: I think people, in general, people associate dark meat with low quality and you’ve only got to look back, if you remember years and years ago, things like [organisation and product] where they through a point of … now they claim 100% breast meat. I remember they went through a really, sort of, focus on it because they were using dark meat and oh that was low quality, it could be anything in there. So, they switched and all the food outlets, they push it 100% breast meat.

I: So, does dark meat get used in other processed products or is it predominantly breast meat that gets used in pretty much everything?

A: You get an element in processed products.

I: You get chicken sausages and things now.

A: Yes, they do get used but it’s very small. I mean dark meat, the bulk of what dark meat is sold, is sold as fresh thighs, legs.

B: There’s been a shift away from whole birds, everything is portioned, and I think if you were buying the whole bird, then you’re going to eat and consume the whole bird, including the dark meat but convenience now, you can just buy chicken breast or chicken fillets.

A: You are right, but 100% breast meat is a selling point across the board now, that’s what people expect but if that changed, then that would be a huge impact and support of the British poultry industry.

B: It would, it would solve an awful lot of problems.

A: It would, it would allow for actually greater production because there would still be a breast meat demand but part of which we have to import because we have to export a lot of dark meat. We could physically, we could produce more birds, but you would just end up with a whole lot more of the dark meat, they’d have to export somewhere. So, that’s why we import.

If people were to eat dark meat as well, then there would be a better balance there, but you wouldn’t have to put all your value into the breast side of it because you want to get some value out of the dark meat export, or whatever, pet food. There’s only so much pet food the country needs. So yes, you put all your value into your breast meat.

I: This feels like a random question but it all links into how the industry works.

B: What are we 65%, 70% self-sufficient?

A: Yes, 60%, 65%.

I: But we would be more if we would eat whole animals.

B: If we produce more, we’d be less reliant on imports but unless we could sell –

A: Or we had better export markets, more reliable that would take more volume.

B: Take more volume but don’t forget, we are reliant on disease free status. So, as soon as we’ve got even influenza that can close down export markets, which we’ve seen with South Africa since last December, we haven’t exported any dark meat to South Africa since then.

I: So, is that one of the places where … where does dark meat go, who likes it, who eats it?

A: Eastern Europe.

B: Eastern Europe but a lot of those Eastern European countries are now members of EU, don’t forget. So, you’ve got that inter-EU trade and pretty much every country outside of Europe, other than the US because they’re a high meat market but yes, all the African countries, Asian countries, Russia used to but then they put an embargo on, but they like the whole bird and they like the dark meat.

A: But some of those, obviously still facing the other problem that they produce, they can see the dark meat, so they export the breast meat.

B: Even Russia has started exporting. The Chinese, the price of breast meat in China is much lower than dark meat, they prefer the dark meat. So, they actually really want to the export the white meat, it’s got no value. The breast meat has no value there. They want dark meat and offal.

I: (Unclear 00:58:36) really interesting.

B: It is, so they want to get rid of that breast meat, the same as we want to get rid of our dark meat.

I: Because it’s just the way with offal in this country, my parents would have eaten loads of the stuff, whereas very few of my peers do.

A: So, yes that’s a contributing factor in all of this. Carcass balance is really important.

I: Thank you, I’m just aware that it’s 3 o’clock. So, we’ve done introductions, we’ve talked a little bit about retail and what they do, we’ve talked about the role of your organisation, who your members are, how you work, the things you’ve put in place, we’ve talked a little bit about the standards and how they’re developing, where you see them going and a little bit about consumers and what they could do, which are the key areas on my list.

Are there things that you feel we haven’t covered that you want to talk about or things that you would like to ask me before we finish?

A: I’m just thinking about what you’re trying to do with this project. I can see it being very difficult because of the lack of data collection.

I: So evidencing that. People saying that and saying where the lack is and what could be done and how it could be done, is useful in itself because it helps push that agenda forward.

A: What, I think, my concern would be, but this is not your concern, it’s a broader picture is that you start to … once you start looking for something like resistance and you start saying, “Oh we’re going to look at the food chain for antibiotic resistance,” all the way through to … you start scaring people and it’s got to be done.

Yes, you want the data, yes you want to understand how it works but I worry that things like this are started from a position of, well there is a problem and people see it, oh but there must be a (unclear 01:00:48), there must be a problem, when we, to our best knowledge, we think that that link through the chain is very small. The science that’s been done so far.

I: Presumably there’s a greater risk to people who work with animals and on plants than there is to the food chain, that’s a direct contact?

B: There is a piece of work that Public Health England did, we’re still waiting for the results, they looked at livestock associated with MRSA and they did two surveys, but they repeated one of the surveys and one was at the pig and poultry fayre and one was at the veterinary fayre in London, they went there twice, and they swabbed people because obviously if you’re in close contact with animals, then you probably are a bit more vulnerable and because you’re working with animals all the time.

So, we’re still waiting for those results and that will be, actually quite interesting to see because obviously if you are exposed to animals, then I think the advice at the moment from the VMD, is well if you work in the poultry sector, for example, you go to the dentist, you tell the dentist, they should then do a sensitivity test before they prescribe you any antibiotics.

But not all health authorities screen people when they go in for a major operation, some do, and I think that’s important and I think probably Health England, they could have done this survey at that end, rather than the way they’ve done it but it’s because not all health authorities screen people.

A: I think that’s a really good point is that we talk about the whole chain. So, with your project you run out against a limit. The human health aspect, not that you can go to medical use of antibiotics or anything like that but where there are instances of illness in humans, nobody tracks them back down the chain.

Everybody is looking at say livestock, food, moving up the chain but nobody is actually going well actually John Smith there, he was ill, and we picked him up, can we track that specific bacteria back through the chain because that’s the point we were getting to with campylobacter, is we’ve done all this work in the chain to reduce and put controls in place but there were still outbreaks of campylobacter.

Not necessarily campylobacter but we’ve got the techniques and the researchers and academics have got the techniques to a place, where if you look to the specific campylobacter in the human incidents, there was a good chance you could match it to a supply chain, but they never did that, it never got to that point. Which actually –

I: So, who would be responsible, would that be Public Health England?

A: Public Health England, yes but that would have been a fantastic next step to be able to say, actually this campylobacter for example, is the one that is present, or we found in ‘X’ supply chain and therefore we can identify a route back and how can we fix it in the supply chain. It never got to that backwards source attribution, that working back, it’s a massive job, individually to do it.

It’s not difficult but to put such a system in place across the health service but it would be a massive job but if you’re serious about tracing bacteria or indeed resisting through from animals through to humans, I think you’ve got to go both ways.

B: I think some of this earlier ESBO work on the human side, I think they actually traced some resistance in those people with the early tract infections, they went back to their home, all of them had pets and the pets had been prescribed antibiotics. So, whether that was a dog or a cat and because dogs and cats like human company, they do come up very close and personal, cat in your face and that can actually lead to something.

So, that sector … so a lot of work has been done by the companion vets who are under as much pressure as GP’s to prescribe antibiotics, so they’re trying to reduce usage in that sector because you have a pet that’s ill, you want to see it better but if the antibiotics isn’t going to work, I think the owner has to understand, well there’s no point in giving it an antibiotic. What’s the point in going to a GP if you’ve got a cold, antibiotics aren’t going to work.

So, we’ve done an awful lot on the animal side, in terms of changing behaviour, there needs to be that same shift and all links into this all one health approach.

A: Because there’s so many elements to it now, so many groups involved, so many chains, its quite prevalent that the attitudes to it. It’s not our fault.

I: Do you find the one health approach useful in overcoming that or is it not quite got that far?

A: It’s not quite got that far yet. It’s getting there but it’s got the right attitude and the right aspirations to it.

B: It has but there’s an awful lot of people still pointing the finger back to the livestock sector and I think that attitude needs to change. I think we need to look at doing this again, this whole one health approach but it’s everybody and everybody needs to be part of it. We’re doing as much as we can, but we also need to see a change in attitude on the human side that it’s not necessarily the fault of the animals and we do actually have that piece of research that demonstrates the risk is actually really, really low. So, the link isn’t as great as people thought it was.

A: And by doing maybe different projects such as this, you may be upping the perception of that link, not that I’m saying it shouldn’t be […]

It almost you want to do it on the quiet and then see what it is, the perception of it just gets carried away really because there are so many people involved, so many different groups, so much finger pointing, it’s not our fault, it’s their fault, it’s their fault, it’s their fault, it’s not our fault. It’s got to be the animals, or it’s got to be the humans.

I: But ultimately, we all want the antibiotics to keep working otherwise they’re all going to need operations at some point.

A: Exactly. So, we all need the antibiotics to keep working, whether it’s animals or humans, that’s the ultimate aim, isn’t it?

I: But yes, the behaviour change is interesting, particularly because I have cat and there has been lots of advice about, she’s not been and has never been on a single kitchen surface in my house but there’s no way I can keep her off my bed, she’s just going to bite me in my sleep.

B: I have the same problem, waking up in the middle of the night with two cats but yes, I keep cats off the work surfaces and they’re generally very, very good. We have an island and one tends to jump up there and he’s probably on there when you’re out during the day, then I don’t know, if eh does it in front of me, I can say, remove him.

I: But its implementing things. I think my point is implementing things in whatever part of the sector is, isn’t as straightforward because you’re dealing with living, breathing willfull creatures, whether it’s a turkey or –

A: Yes, and I think that’s the core of or part of why we started this, is it may not be our fault, we don’t know, lets find out but in the meantime, we’ll do what we can just in case our impact is more than we think.

I: And ultimately it probably saves money anyway. So, everyone wins in the long run.

A: Yes, exactly and if every part of the trade took that approach then we’d be in a much better place right now.

I: Thank you very much, I’ll let you off and turn the recording off.

P1: You’re welcome.

**[End of Recording]**