

TRANSCRIPT

LEGISLATIVE COUNCIL ECONOMY AND INFRASTRUCTURE COMMITTEE

Inquiry into Pig Welfare in Victoria

Melbourne – Tuesday 26 March 2024

MEMBERS

Georgie Purcell – Chair

David Davis – Deputy Chair

John Berger

Katherine Copsy

Bev McArthur

Tom McIntosh

Evan Mulholland

Sonja Terpstra

PARTICIPATING MEMBERS

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David Ettershank

Michael Galea

Renee Heath

Sarah Mansfield

Rachel Payne

WITNESSES

Dr Chris Richards, Managing Director, and

Dr Kate Savage, Veterinary Consultant, Apiam Animal Health; and

Dr Tony Peacock, Chair, and

Dr John Pluske, Chief Executive Officer and Chief Scientist (*via videoconference*), Australasian Pork Research Institute Ltd.

The ACTING CHAIR (Katherine Copsey): I declare open the Legislative Council Economy and Infrastructure Committee's public hearing for the Inquiry into Pig Welfare in Victoria. Please ensure that mobile phones have been switched to silent and that background noise is minimised.

I would like to begin this hearing by respectfully acknowledging the Aboriginal peoples, the traditional custodians of the various lands we are gathered on today, and pay my respects to their ancestors, elders and families. I particularly welcome any elders or community members who are here today to impart their knowledge of this issue to the committee or who are watching the broadcast of these proceedings.

My name is Katherine Copsey. I am a Member for Southern Metropolitan, and in Georgie Purcell's absence this afternoon I am going to chair proceedings. If we could have committee members in the room please introduce themselves.

Bev McARTHUR: I am Bev McArthur, Western Victoria Region.

Gaelle BROAD: Hi. I am Gaelle Broad, Member for Northern Victoria.

The ACTING CHAIR: Do we have anyone online? Are any other members online now? I do not think so. All right then. If you could each please start by stating your name for the committee and the organisation that you are representing this afternoon.

Chris RICHARDS: Thank you. I am Dr Chris Richards, the Managing Director and a consultant pig veterinarian for Apiam Animal Health. I have been a practising pig veterinarian for 27 years, having started my own practice in Bendigo in 1998 solely caring for pigs. We joined with several other regional veterinary clinics in 2015 to become Apiam Animal Health.

Kate SAVAGE: Dr Kate Savage. I have been a pig vet for more than 12 years. I am consultant pig vet with Apiam Animal Health, and I have a vet degree and a masters in international animal welfare, ethics and law.

Tony PEACOCK: I am Dr Tony Peacock. I am the Chairman of APRIL, which is the Australasian Pork Research Institute.

John PLUSKE: Good afternoon. John Pluske is my name. I am CEO and Chief Scientist of the Australasian Pork Research Institute Ltd.

The ACTING CHAIR: Thank you very much. Before you commence your statement, all evidence taken is protected by parliamentary privilege as provided by the *Constitution Act 1975* and further subject to the provisions of the Legislative Council standing orders. Therefore the information you provide during the hearing is protected by law. You are protected against any action for what you say during this hearing, but if you go out elsewhere and repeat the same things, those comments may not be protected by this privilege. Any deliberately false evidence or misleading of the committee may be considered a contempt of Parliament.

All evidence is being recorded. You will be provided with a proof version of the transcript following the hearing. Transcripts will ultimately be made public and posted on the committee's website.

I welcome you to make your opening comments, but I ask that they be kept to a maximum of 10 to 15 minutes to ensure we have plenty of time for questions and discussion.

Tony PEACOCK: Great. Thanks, Chair. I am going to kick off. Thank you for the opportunity to appear here today. I am Tony Peacock, Chairman of the Australasian Pork Research Institute, or APRIL. John Pluske is the Chief Scientist for APRIL and is appearing here electronically. Between Dr Pluske and me, we have over 50 years of research experience in the international pork industry, including work at the University of Western Australia, Murdoch University, the universities of Saskatchewan, Alberta, Kansas State, Sydney and Melbourne. We each hold PhDs in aspects of science and pork production. Besides our academic experience, we are both very involved and familiar with pork production and processing.

John has just been recognised with the 2024 American Feed Industry Association Award in Nonruminant Nutrition Research. He was also the Fulbright Distinguished Chair in Agriculture and Life Sciences at Kansas State University. I will turn to John to talk about APRIL and our contribution to the industry.

John PLUSKE: Thank you, Tony, and thank you, Chair. As a scientific institution, APRIL strongly believes and adheres to scientific principles in the R and D that we support – the research and development we support – and firmly advocates that evidence-based research and development is indispensable for its relevance and potential application into industry. Our mission is to be a thought leader, to undertake new and high priority research and development and to contribute to the overall sustainability of the industry. Just by way of background for members, the Australasian Pork Research Institute Ltd is a legacy organisation from 14 years of activity supported through the cooperative research centres program. During this time pork producers, national and international universities and research organisations, including the Victorian Department of Primary Industries, as it was known back then, service companies and industry bodies – for example, Australian Pork Limited – contributed in excess of \$60 million in both cash and in-kind contributions to match the investment from the Australian government.

Funds were used across a broad range of scientific and education and training programs with the overall aims of making the Australian pork industry more internationally competitive, more efficient and more contemporary. In this time, millions of dollars were invested into supporting the industry transition to the group housing of sows – for example, the study of feeding systems, space [Zoom dropout], behaviours and also the study of different farrowing pen designs. This research is publicly available. As a scientific institution, the Australasian Pork Research Institute Ltd is continuing to support R and D in the industry. We fund R and D as well as education and training activities and act as a knowledge broker, co-funder and catalyst for these activities. We are internationally connected and reach out when and where appropriate to seek advice and to collaborate. These activities are conducted through our well-established and time-honoured links with universities and research institutes, allied service companies to the industry, pork production businesses and the peak body, APL. To date we have invested more than \$11 million into R and D across a broad range of different subjects and areas, from nutrition and feed efficiency to meat science, husbandry, health and disease, reproduction and welfare.

The processes that APRIL uses to support R and D are extremely rigorous. The R and D that we fund comes from a combination of open calls – which are nationally competitive and open to any organisation, whether they are members of April or not – and calls against priorities that have been judged as being necessary for the industry to address. All applications are assessed by our research and development advisory committee, composed of experts, following independent external peer review. All projects are assessed against scientific and industry-oriented criteria, and then recommendations are made to the APRIL board. All projects that we support must adhere to the scientific process and accord to high standards of animal use and animal care.

All studies must have animal ethics approval. Research we are involved in is also determined independently of our own processes – for example, through the Australian Research Council and through the cooperative research centres project scheme. I would just like to touch on a current project that we have that is supported by the Australian government through the CRC project scheme. This was mentioned on 13 March. APRIL is a partner exploring the aetiology of tail biting on a project that was part funded by the Australian government, and that is supported through the CRCP scheme. Tail biting, as we have heard, is a very complex problem caused by many different factors. In its commentary in 2014 the European Food Safety Authority stated, ‘It is, however, important to remember that due to the multifactorial nature of tail biting, measures need to be tailored to local conditions, taking into account, for example, climate, pig breed and building practices.’

How pigs are farmed in Australia can be quite different to how they are farmed in these countries, and that presents different challenges to our pork producers. It is worth noting that in countries where tail docking is

banned, such as Sweden and Finland, the modification of some management and husbandry practices that are purported to stop tail biting – for example, additional space and enrichment – has not completely prevented tail biting from occurring. World-leading researchers in these countries say that no production systems are safe from tail biting. In herds in [Zoom dropout] if you look at the published data, the prevalence of tail biting and observed tail lesions still varies markedly, and this is because of the multifactorial nature of the issue. What this collectively means is that there are no quick fixes to allow producers currently to raise pigs with intact tails. If there were consistent and reliable solutions, tail docking would not be happening. It is actually why we are doing this research. We are looking for solutions that are evidence based and can be applied in the industry, but it is only through the nexus of R and D with education and training, which we strongly support, that this can occur and progress can be made. Thank you very much.

Tony PEACOCK: I was pretty disappointed listening to one witness that you had here in a previous session who said that you could have gone to sleep in 1980 and woken up now and nothing has changed in this industry. That is not my experience. My career started in the pig industry in the 1980s. During the late 1970s and 1980s the industry stopped castrating pigs. I did not see a pig castrated until I worked in the Canadian industry. Most of the rest of the world still castrates pigs. Australia led the world in stopping castrating, and Improvac, the vaccine now used around the world, was developed by a collaboration between the Victorian Institute of Animal Science and CSL Animal Health. Australia was the first place in the world to register immunocastration, in 1998.

During the 1990s we also introduced the ProHand program that John very briefly mentioned. We actually did so in the face of ridicule from the Sydney shock jock of the day John Laws and the Australian Senate for spending taxpayers money on what they termed a ‘pat a pig’ project. Some of your earlier witnesses made the case that the industry is slow to respond to public sentiment. In the case of the professional handling of pigs – and Professor Hemsworth will be speaking to you later; he was the principal investigator on that work 30 years ago – we were way ahead of public sentiment.

I was the research manager at the pig R and D corporation in the 1990s when CO₂ stunning was introduced. The committee has heard several times that the first unit was installed in Corowa in 1991. To my recollection there was actually a research unit at the Victorian Institute of Animal Science earlier. CO₂ stunning was introduced because it is far preferable to electric stunning. Pigs and staff are far calmer around CO₂ stunning than electrical stunning. Meat quality, which reflects the level of stress of a pig at slaughter, is far better with CO₂ stunning. During the 2000s, dry sow stalls were phased out of the industry. Stalls were originally introduced because they reduced fighting amongst sows, and actually they were introduced here principally because of research in France. So the Europeans are not always ahead of us. It is not a simple or straightforward thing to change the infrastructure of an industry, as the pig vets pointed out.

Antibiotic use and hormone use has changed substantially. There are many myths about hormones. There are no added hormones used in the Australian pork industry. Antibiotics are used to treat sick pigs. Just like in human medicine, we make efforts to target the right antibiotics for the right diseases in the right amounts. The livestock industries, in my view, are doing much better in our antibiotic changes than the medical industry is for human health. So I think it is disingenuous to say the industry has not changed. These were changes initiated by the industry itself, not imposed on it. The truth is most people eat and enjoy pork. John and I are proud to work with an industry that provides tens of millions of high-quality economic meals to Australians, employs thousands of Australians in regional Australia and is as committed to science as this industry is. Thank you.

The ACTING CHAIR: Thank you very much. Now we will go to committee members to ask some questions, and I will start with Mrs McArthur.

Bev McARTHUR: Thank you, Acting Chair.

Chris RICHARDS: Sorry, Chair, I also have an opening statement from Apiam.

The ACTING CHAIR: Oh, please continue. Sorry.

Chris RICHARDS: Thank you for the opportunity to speak to the committee this afternoon. I speak to you today as a veterinarian who has spent the last 27 years in my veterinary career caring for pigs based in Bendigo but consulting throughout Australia and South-East Asia. When I started my practice in 1998, life as a vet was

very different to today. Vets got called out to piggeries only if there were multiple sick pigs, and life for a pig vet was about trying to stop a disease rather than trying to prevent it.

The industry was highly fragmented. In many cases pigs were a secondary but important part of a farm, with pigs raised to consume the excess grain from broadacre properties and excess milk and by-products from dairy farms. It provided year-round cash flow for farmers. How things have changed. Now pig farms are highly sophisticated, with highly educated owners and stockpeople, and the interactions between health, welfare and production play a significant part in maintaining a sustainable business. As veterinarians we play a role in not only health and welfare but in ensuring that these are optimised through production practices, through improving caregiver competency and objectively assessing outcomes so that continual improvement occurs.

Today I would like to talk to you about what our vets at Apiam do as part of their role in the industry and how we meet our ethical obligations and legal responsibilities in caring for pigs. Apiam Animal Health is a veterinary business. We have clinics located throughout regional Australia providing services to all the livestock industries as well as companion animals. Apiam did begin as a swine veterinary business in Bendigo, but it is now made up of 74 veterinary clinics and over 330 veterinarians, including pig veterinarians that service all types of piggeries. In Victoria we have over 160 veterinarians located in regions where people raise pigs. Apiam swine veterinarians are one part of a team of advisory services that provide specialist skills to commercial pig farms in Australia. We are proud to provide research-based advice and professional services to pork producers. In our role we have the ability to see the whole range of different production systems from small family farms to large-scale corporates, fully indoor production to free-range production. What is common to all is the passion and care that pig producers have for their pigs and that all these systems operate slightly differently in order to meet their welfare code obligations.

As a large group of vets we have the privilege to be able to travel and experience many pig industries around the world, assessing global practices so that we can assist our producers in continual improvement, including in animal welfare, based on science. I would clearly say that Australian producers are some of the global leaders in animal welfare. Our progressive approach to adoption of new housing systems, such as the group housing of gestating sows, and our investment in welfare research are well recognised and spoken about kindly by the international swine community. In fact some of them are quite jealous of the investment that we make in science and particularly welfare. Our clients are generally well-educated, experienced producers who seek to improve through evidence-based research outcomes. We are very fortunate to be part of an industry that has spent more than \$23 million of producer levies on animal welfare research in the last 10 years. This research allows us to make meaningful changes on farm based on science. For example, when producers moved from up to six weeks for gestating stall use to up to five days use, it was the research that informed us how to best minimise the sow aggression experienced when putting sows into groups. We believe that welfare standards and legislation should have the same strong scientific basis.

We are also very fortunate to work with many skilled pig caregivers, many of whom have trained as animal scientists or veterinarians overseas. In fact most of the large commercial piggeries in Australia actually have veterinarians on them full time who have worked overseas, particularly in our Filipino communities. Our vets build on these skills with ongoing training of stockpeople in health and welfare, and we assess expression of competency during farm visits. During a visit from one of our vets it is not uncommon for farm personnel to have both formal and informal training. We also educate and upskill our producers in health and welfare on a regular basis. Every time we are on farm – and I am on farm every 30 to 90 days with my clients – we are observing and assessing pig health and welfare, and where there is a potential issue that is identified we implement practical interventions to resolve it. However, most of our animal welfare discussions these days are not about raising producers to the minimum legal standards but rather taking an already compliant farm and improving the welfare of the animals even further. We encourage producers to go above and beyond the bare minimum set out in the legislation.

I now want to talk to biosecurity because biosecurity is a key responsibility of our vets. We are heavily involved in the creation of our clients' farm biosecurity plans. Biosecurity is a serious issue for the health and welfare of every individual pig and the viability of the farm. Every time a visitor of any type, including vets, steps on farm, the business is taking a risk that disease could potentially be introduced to the animals. People moving between farms risk moving disease into a naive population. So we put biosecurity measures in place to reduce that risk, and part of that plan is to minimise the number of visitors. Biosecurity requirements include downtime between farms. In many cases our vets only visit farms two or three days a week. It might be on a

Monday or a Wednesday or a Friday, having at least 24 hours downtime between farms that have different health statuses. Precautionary actions are undertaken in relation to footwear, vehicles and equipment, including sterilisation practices using specialised equipment, so that we do not take any bugs from one farm to the other. This brings significant cost to our business, but it protects the producers that we visit and the pigs that we provide care for.

Activists illegally entering farms means that our biosecurity measures are undermined, our systems are breached and the risk of introducing pathogens is uncontrolled. For example, if a person had previously visited a piggery with roundworm and they were to wear the same shoes and then set foot on farm, they risk introducing roundworm to the pigs. Adult roundworms compete with a pig for nutrients and interfere with absorption of nutrients. Eggs of roundworm are very resilient, lasting up to 10 years in the right conditions. So this is not a disease that comes and goes; they have got it for life. Bringing them into a farm means the farm will have to treat their pigs against those worms to prevent illness and loss of condition. It is all preventable if biosecurity protocols are adhered to.

The presence of illegal visitors also causes acute distress to the pigs at the time of the visit. The routine for most farms first thing in the morning is to feed every sow and check them over to ensure that they are healthy and not showing any signs of disease. When activists enter a farm in the middle of the night with torches and headlamps, the pigs actually think it is breakfast time, and they get quite distressed with the activists moving around, particularly when they do not feed them. The pigs become agitated and vocalise, which you may have seen in some of the illegal footage.

I also cannot underestimate the impact illegal trespassing has on producers. We see considerable stress on caregivers following an illegal biosecurity breach, and why wouldn't they when they spend so much time caring for their pigs? Illegal trespassing compromises our role in improving the health and welfare of pigs. It needs to stop. Thank you for the opportunity to present to the committee today.

The ACTING CHAIR: Thank you. Dr Savage? I do not want to jump the gun again. Great. Thank you very much for your opening statements. Now we will go to Mrs McArthur for questions.

Bev McARTHUR: Let us just follow on from the biosecurity risks of illegal trespassers. Should we have far stricter penalties for people illegally trespassing on farms?

Chris RICHARDS: I do not know whether I can really comment on that, except that we should be doing whatever we can to make sure that we do not have trespassers on farms.

Bev McARTHUR: What expense do farmers have to go to to try and prevent people entering their farms illegally?

Chris RICHARDS: Producers put in a lot of different systems to prevent animals, feral pigs and other things, coming into farms, whether it is bird netting and things like that as well. There is a lot of expense in putting in biosecurity systems. The impact of a biosecurity breach depends on the pathogen, but it is huge. It is not \$10,000 or \$100,000. I mean, for a significant breach we can be talking millions of dollars, and in the right circumstances it can be enough to bankrupt a farm.

Bev McARTHUR: Let alone what damage it does to the pigs, when we are supposedly interested in animal welfare.

Chris RICHARDS: Correct, yes.

Bev McARTHUR: Tell us, you have got international experience: how does Australia compare with the rest of the world in the way we look after our pigs?

Chris RICHARDS: As I mentioned in my opening, Australia is really revered when it comes to animal welfare and actually adopting and doing what we say. If we look at other countries, for example, in the US, there are no standards around stocking densities of pigs, okay. It is only recently, when the California prop 12 has come in, that suddenly the industry has started to look at stocking densities for sows and for growing pigs,

Bev McARTHUR: We have heard from the animal activist industry that no amount of change to regulations and protocols would suffice, that slaughter is cruel and therefore we should close the industry down. We would be importing product from countries with far inferior welfare standards – would that be accurate?

Chris RICHARDS: They would be far inferior to what we have in place currently.

Kate SAVAGE: I just want to add there –

Bev McARTHUR: Yes, please.

Kate SAVAGE: we are already importing from the US as well. It is actually our main country that we import from. It was over \$300 million a year, I think, for 2023–24 worth of product that was imported into Australia with, as Chris said, no standards around the stocking and density of those progeny pigs or how long sows can be in stalls for or any of those things that our industry has been working on for quite a long time.

Bev McARTHUR: So the Australian industry really are operating in a very unfair playing field, aren't they? If the imported product can be produced at a lesser cost because they do not have these animal welfare protocols and standards, our producers are at a disadvantage. Would that be accurate?

Chris RICHARDS: Yes, for sure.

Tony PEACOCK: Absolutely. The Australian industry is not subsidised like many of the European industries are. We do not have the vast quantities of corn that are grown in the United States and Canada, and the subsidies that are in Canada are really substantial compared with Australian farmers. Australian farmers are both really efficient and very, very good at their jobs.

Bev McARTHUR: We hear a lot about CO₂ and how dreadful it is. Is it currently considered the most humane option for slaughtering pigs?

Tony PEACOCK: Absolutely. And I think it was a little bit strange in your last presentation – the PigStun project that is looking at even improving on the current methods in Europe has only been going for three months. The kick-off meeting was in December. I think there was an impression given that it had been going for some time. It has certainly been talked about for some time, as most European things are for quite some time before they actually happen, and we have reached out to the institutes in Europe. We will make sure that APRIL is well aware of what is going on. There is a whole factor of things as pigs go into stunning – you know, the genetics, the handling, those sort of things – but I think it would be a massively backward step to go back to electrical stunning overall or anything. CO₂ stunning, when done properly and as prescribed, is a very calm process and certainly world's best practice.

The ACTING CHAIR: We will –

Bev McARTHUR: Sorry, have we run out?

The ACTING CHAIR: No. Dr Pluske I think had a contribution.

John PLUSKE: Yes. Just to add a little bit more to the PigStun project, and that has been talked about before. It is a €2 million project over about two years. €2 million is about \$3.5 million. It is a reasonable sum of money if we were to try and support that. I have actually reached out to the chief investigator of that project, and I am looking forward to an invitation to be part of that consortium, which involves Spain, Denmark, the Netherlands and Germany. And just to add support to Dr Peacock's comment: there is robustness and there is scientific method and scientific process to the alternative processes that they are exploring, and I think that obviously there is a lot of discussion about CO₂ stunning. Until we have good, solid science-backed evidence to look at alternatives then we have the current system, and I am certainly looking forward to being involved in this project.

Bev McARTHUR: We hear a lot about the fact that handling of pigs is a sensitive issue. Explain to the layperson like me how a pig is affected if they are having to be picked up and handled, given an injection and moved somewhere else.

Tony PEACOCK: Well, they certainly react, and that is my concern about some of the things on piglet handling. It really is very much about how many times they are handled, how often they are handled. I should defer to Kate, because she is actually on farm much more than me.

Kate SAVAGE: Well, the basic principle I have always understood is that they are a prey species. They are not domesticated cats or dogs. Picking up a piglet, lifting it off the ground to hold it, to restrain it, is a stressful event for that pig in its short life, so it is not that we routinely go in and pick up piglets and pat them and cuddle them. That is stressful for them. As much as I would love to do that – because they are adorable – that is not okay for them. So we are just trying to minimise those interactions when we are talking about these options for pain relief et cetera.

Chris RICHARDS: And we have seen how that has really evolved over the years too. For example, with my clients I try to get them to do everything to their piglet on one day. I do not want them to be picking them up on multiple occasions. We have seen industry adopt some new technologies in the last couple of years, where we have been able to combine two different products that were given on two different days into one product that is now given at the one time. It is well known that people just do not want to pick pigs up, because we know that they get stressed every time we pick them up, so minimal handling in those early days is really important. We want them focusing on –

Bev McARTHUR: It is an animal welfare issue.

Chris RICHARDS: Well, we want them focusing on the udder of the sow. We do not want them to be stressed and do anything that takes them away from them being able to nourish themselves as best they can.

Kate SAVAGE: That does include teeth clipping and tail docking as well, so where it is possible to phase those out, producers have phased those out. Tail docking and teeth clipping are really only used where really necessary, as in we have not figured out, as Dr Pluske was saying, the complexity of tail-biting behaviour. If we cannot figure out that farm situation and how we can phase out tail docking, we may have to continue to use it. But it is just very frustrating that we can stop tail docking on some farms and they will fare quite well and not have any issues and we can stop tail docking on another farm and they will have tail biting. As Dr Pluske was saying, we are not alone in this. This is a global concern about how we are going to phase out tail docking. For us as on-farm vets, it is one farm at a time, one producer at a time, and we are deep into that process at the moment.

Chris RICHARDS: There is definitely motivation around teeth clipping and stopping teeth clipping. I do not have any of my clients that have teeth clipping. However, I need it in my back pocket in the event that we have a tail-biting outbreak and we just cannot resolve it in the short term. They come on very rapidly, very quickly.

Bev McARTHUR: And do they all follow the leader?

Chris RICHARDS: Yes, correct. As Dr Peacock mentioned and Dr Pluske, we do not know. I saw a report last week where there are 87 potential causes of tail biting, and we really do not have a lot of information on why it happens and why it does not.

Tony PEACOCK: I would just like to add that the cooperative research centres project that we have got, which is about an \$8 million project all up, is the biggest project in the world addressing this. We are using big data. We have got a geneticist at New England crunching enormous amounts of data, which even a couple of years ago you could not do. I do not know whether, John, you want to add to that, because you have managed that project, but it is a huge project and there is nothing like it in the world. We are the leaders.

Bev McARTHUR: Do you find that the farmers are welcoming to new ideas and all your advice, or do they reject it?

Chris RICHARDS: No, absolutely. If we think of some of these husbandry things, they want to take a lot of these labour requirements away, so there is motivation to be able to do as little as possible to the pig.

Kate SAVAGE: We do get asked why, though. We are reliant as vets on farm on the science. Our producers are quite educated. If we are going to make welfare changes and we are going to be recommending, ‘Hey, let’s

change from this and move away from that,' they are going to say, 'Why? Show me the science and the research.' So that is what we have to be able to show them.

Bev McARTHUR: We all want to see the science and the research. Doctor?

The ACTING CHAIR: Dr Pluske, did you have a contribution on that question? Otherwise I will go to Ms Broad.

John PLUSKE: Just to quickly add, Chair, that as I mentioned in my statement, members of the CRC project are internationally connected. We are in regular contact with researchers and practitioners around the world through our networks and through our connections. And Dr Peacock is right – this is the largest project. We are following from birth through to slaughter about 90,000 pigs, which is an enormous undertaking. It has not been done anywhere else in the world, and what we hope to glean from all the information is what the real risk factors are under Australian conditions, because as I mentioned, our conditions of farming are not put in necessarily in other parts of the world. We often think that the Europeans are best practice, and in some respects they are, but they are not best practice for all things, and hence we need to do our own R and D. We need to do our own science under our own conditions to support practices for the pork industry to use.

Bev McARTHUR: Thank you.

The ACTING CHAIR: Thank you. Ms Broad.

Gaelle BROAD: Thank you very much to each of you for being here this afternoon. I am just interested in that, Dr Pluske. Can you talk to some of those conditions and what varies? I mean, obviously we are down under down here, so what are the differences that the industry faces compared to overseas?

John PLUSKE: Thank you for the question. One of the most obvious differences is the design and construction of the buildings. If you are farming pigs in Finland or Sweden, the temperatures are quite a bit different than they are in central Victoria or other parts of Australia, therefore the ventilation systems and the flooring systems lend themselves to suit the climatic conditions of the environment hence there are differences in building design and differences in climatic control. Other differences relate to regulations. In Finland and Sweden pigs are prescribed to have more space. They are prescribed to have enrichment in the form of straw. We are exploring aspects of enrichment in a project that is aligned to the tail-biting project, but as many producers can attest, the use of straw under Australian conditions is not as simple and easy as it sounds due to potential issues with effluent management. There are some alternative enrichment sources. One was mentioned earlier today, a swine block, which is a molasses-based enrichment block, and we have a current project looking at an alternative form of plant material for enrichment. But it really is all in the theme of conducting the science, looking at appropriate scientific rigour and scientific process and then exploring the results.

Tony PEACOCK: I think the other thing to mention is we are a closed herd. Australia does not import pig genetics to this country. That is quite different to other countries, and the genetics will really interact with the environment as to some of the things Kate has been speaking about. They may explore that, but we do not always know, and it takes quite a lot of science to work that out.

Gaelle BROAD: Now, I am just interested too – we have seen I guess the number of businesses in the pig industry decline. Do you have any comment on or feedback as to why?

Chris RICHARDS: I mean, we are seeing consolidation across most of the livestock industries. I think it is really because of the sophistication around the businesses. I think we are continuing to meet society's expectations around how we raise animals and the care we provide them and how much we know about them and we can monitor. Probably from a health point of view there is actually an ability to detect sick pigs early. It is a lot easier in an intensive system to pick them up when they are sick earlier because they are closer and we have got various technologies now where we can detect that earlier. There is a direct link between the health and welfare of the pigs and performance, so farmers have a motivation to make sure their pigs are healthy.

Gaelle BROAD: So what does that look like at a practical level? How is Apiam working with farmers to really focus on that animal welfare and making improvements?

Chris RICHARDS: We have obviously got plans in place – you know, veterinary plans – and from those we spend a lot of time training our caregivers on looking for early detection of pigs, particularly when we know they are susceptible, like all animals, in the first few days of life or at various stages. So there is a lot around training. Then we are really monitoring all those pigs on an ongoing basis. For example, today while I have been sitting here for 3 hours, I have received information on seven of my farms on their production performance and their health performance over the last week. It is not the old James Herriot days, where we get called out to a sick pig. We actively have access to the production data that is happening on farm in real time, and there is an expectation that vets are intimately involved in the health of those animals and monitoring the health and welfare of those animals. So on farm we are spending a lot of time mainly with people making sure that they are looking out for pigs that are sick and that they are aware of their obligations under various codes and Acts.

Gaelle BROAD: You talked about biosecurity protocols for entering a pig farm. Do most farms follow those stringent protocols and standards? Can you talk to that?

Chris RICHARDS: Yes, they do. To most of the commercial producers biosecurity is huge. Certainly we heard today from the RSPCA guys that it is a normal practice to either shower into a piggery completely or at least to fully change clothes and boots and get into piggery-wear clothing. That is just one component of it. It is also about how we manage pigs that come into the piggery. At the moment obviously with African swine fever there is a huge focus on bringing pork products into piggeries – they are just not allowed, and a lot of actions have been taking place on farms, including providing meals and other things, to make sure that people do not bring pork products into piggeries. We have downtimes that vary from 24 hours if we are going from one farm to another to seven days if we are coming in from a country that has got foot-and-mouth disease. There are a lot of protocols in place.

Gaelle BROAD: Dr Pluske. Yes.

The ACTING CHAIR: Just jump in. Go for it.

John PLUSKE: Yes. I am sorry. Thank you. If I could just perhaps give a little bit of colour to Dr Richards's comments there. I remember being at a conference in the USA about 10 or 11 years ago, and there was an outbreak of an extremely serious disease called porcine epidemic diarrhea virus, which actually is a coronavirus. The veterinarian that was giving the presentation was basically in tears as he showed pictures of truckloads and trailer loads of dead piglets – mortality could be 100 per cent with PEDV. This was completely unseen; there were cases earlier in Europe in the 1990s and 2000s, but this was an unintended introduction of this virus into the USA. It absolutely devastated the industry for many years. I guess with biosecurity there is that risk of the unknown. Dr Richards gave the example of ASF, but there are other diseases that you just do not know, and hence biosecurity has to be taken extremely seriously.

Chris RICHARDS: There is a really good example recently in that if you take something like roundworm, which I spoke to previously, if you look at the five last or six years, we have had next to zero farms that would have actually had roundworm. Then recently, in October, Agriculture Victoria released the results of a survey that they did where they tested 46 farms and found a third of those farms now have roundworm, which we cannot understand, because most of our genetic herds do not have roundworm. So these things just pop up and they come back and somehow they spread, and that is why we put all these biosecurity programs in place.

Tony PEACOCK: You did ask about penalties. The Australian government has vastly increased penalties for people bringing pork into Australia – any meat products. We now turn around the odd person and send them home for bringing it, and the fines have gone up really substantially. I think it would be a good recommendation to increase the penalties for biosecurity breaches. There are not that many industries that can actually cease to exist due to a disease or something coming in. It is an existential threat to the industry. They take it incredibly seriously. That is why people react so badly to these farm invasions, because they are being so careful every day. They are telling their employees, 'Be careful.' They are really vigilant about this stuff. And to be invaded and have people just dismiss it as 'Oh, we change overalls' or that sort of thing, for somebody to say 'I broke the law 91 times and I'm going to continue to do it' is incredibly distressing to producers.

The ACTING CHAIR: I might jump in if that is all right. I think we will have time for another round of questions at the end.

Gaelle BROAD: Yes. Thank you.

The ACTING CHAIR: Thank you. I am interested in how information is disseminated through the industry. Is the main form of intelligence or reporting that we are getting on what practice is taking place across industry coming to light through audit and registration requirements? Is that the main source of information? For example, we know the progress of phasing out of sow stalls. Where is that information coming from, to be able to be publicly reported like that?

Chris RICHARDS: I think Australian Pork Limited have put out some industry data. Apart from that we would just know within our own client base what that looks like, but having said that, obviously as a veterinarian and having an ethical obligation to not talk about clients or disclose who they are or who they might not be, I certainly would not be in a position to tell you what our client base looks like. But they are very sophisticated, very progressive clients.

The ACTING CHAIR: I am just interested in these information sources to understand. As you say, it seems there is willingness across the industry to take up innovative practices and to work collectively to see that uptake broadened throughout the industry, and I am interested in how we monitor that, essentially, over time.

Tony PEACOCK: At the industry level it is generally based on the number of sows you have, so as delegates go to APL – and they can explain it a lot better than me – it depends on your production base. If you have got new information on dietary issues, a very small base of nutritionists in the industry can affect probably the top 80 per cent of the production quite quickly. The industry is really hungry for science knowledge, so they take it up very quickly. My colleagues around the cooperative research centre have been in association for years, and we are always trying to get more PhDs into the industry. They are always amazed at how many PhDs sit in the pork industry. Of the rural industries that I am familiar with, it is by far the most science-hungry organisation.

In terms of reporting, I have been surprised at some of the figures of, you know, 80 per cent reduction in sow stalls and things. I think you are dealing with a very long tail of people with a very small number of pigs that do not report up through APL. They probably do not join organisations, and they might only have pigs every now and again when the price is up. I am not sure how you would ever get to those people. That exists in every industry.

The ACTING CHAIR: Yes. Just going to another issue that you covered in your evidence around surgical castration, we heard from one previous presenter that there was still some practice of that, so there is this gap in the reporting that might be available to track the uptake of these practices. What I am hearing from witnesses is that you have got reliable information where you have got a producer reporting against a standard or trying to regain a certification – that is quite reliable – but as you say, there are smaller producers and parts of the industry that might not be providing information through those reports.

Chris RICHARDS: I think castration is an interesting one, because from a production point of view pigs that are castrated do not perform as well, so there is actually a disincentive to castrate, and really the only people who do castrate are meeting a requirement of a certain market, which in many cases is an export market to Asia. There is actually a disincentive, and there is no need to now – now that we have had Improvac for 25 years. It is a very effective product.

The ACTING CHAIR: Thank you. I just want to go now to a few specific practices that we have been hearing about. The point that we are getting to, as you say, is sort of at the long tail end of phasing out sow stalls to the point of there being a small number of days when it is used. Do you see any barrier now to that forming part of guidelines and part of the standard in the government's next round of updates?

Chris RICHARDS: I do not see barriers for gestational stalls, because most of the industry is already abiding by that. In terms of mating stalls, I think that is still a very important part, particularly when we have got animals that are in oestrus and can potentially be showing health issues as well, so we want to be monitoring their food intakes and monitoring other things as well. But when it comes to actual gestational stalls, I think the majority of the industry is really phasing them out. I think you will find that over time those numbers just naturally increase as the industry consolidates and the smaller guys exit the industry, because if you think about why they would not convert now – since we have got all the science to back up getting very

good performance out of group sow housing – the only reason they would not do it would be because of the capital spend because they are looking at potentially exiting the industry.

The ACTING CHAIR: Can I go to one other practice – well, a suite of practices, which are the surgical interventions like teeth clipping. We heard a bit about ear notching but also tail docking. My feeling from the presentations that we have had is that there has been a move to less routine use of those practices. Would you say that is fair?

Chris RICHARDS: Absolutely.

The ACTING CHAIR: And there is an ongoing drive from industry to seek to reduce those as much as possible?

Chris RICHARDS: I think as veterinarians certainly in our practice we are always asking the question of those people who are doing it if they need to continue to do it, and we might try to remove it. In some cases we are successful; in others we have to reintroduce it. So there is certainly motivation around the teeth clipping, yes.

Kate SAVAGE: Really, when Chris mentions the reintroduction, it is in response to issues. I think it was mentioned earlier with the teeth clipping we are trying to prevent damage to the sows' teats and we are trying to prevent injuries to the piglets when they are fighting each other, so it is not something where it is sort of financially based or something as the cause for reintroducing it. You know, as vets we are going to go back in and say, 'Listen, we can't have all of these injured piglets and all of these facial infections. You have to go back to teeth clipping.' And similarly with tail docking: 'Okay, we tried. It didn't work. We'll have to reintroduce it for the time being, and let's go back to the predisposing factors; let's look at the next steps,' or whatever. It is really only as necessary, but it is about preventing those injuries and infections and other issues; it is not typically financial that the vet is going to go back in with it.

Chris RICHARDS: It is actually the opposite. I mean, there is an additional labour cost to do it. It is not something that people really want to do.

The ACTING CHAIR: I have just one more question, then I think we can open it up to other members if we have got some time for another round. In relation to that, are there situational factors that make those injuries more likely? That is what I am trying to understand: why would someone still be undertaking those practices in a fairly systematic way, and what kinds of conditions would lead to a need for those amputations?

Chris RICHARDS: Maybe John might want to talk to this, because this is the unknown on a global basis. The global industry have the same challenges, as we really do not know. As Kate said, we can stop tail docking on farms, and on some it works and on some it does not; on some it works for a short time and on some it does not. But at the end of the day our focus is on the welfare of the pigs and doing whatever is required for the best welfare of those pigs in that particular farm.

The ACTING CHAIR: Is density a factor – density of animals?

Chris RICHARDS: We see it in indoor piggeries, outdoor piggeries; we see it in intensive, free range – it is a huge number of factors.

The ACTING CHAIR: Yes, Dr Pluske.

John PLUSKE: If I could please follow on about the space. In Sweden, for example, I would mention that the space allowance per pig in growing Finnish pigs is higher –

The ACTING CHAIR: Sorry, that was a motorbike going by outside.

John PLUSKE: But as I mentioned, there is still tremendous variability in Sweden in the instance of tail biting and therefore tail lesions, and talking to the lead researchers from those countries, including Finland, it is extremely frustrating for them. They have been trying this for 25 to 30 years, and as Dr Savage mentioned, there are some units, some farms, where they can practise raising pigs with intact tails extremely successfully. For the neighbour, with similar feeding circumstances, similar buildings and similar genetics, there is a different outcome. That is why, with respect to some of the factors, their space allowance has been shown in

literature when you do a meta-analysis as a risk factor, but when you burrow down a little bit more, it is not the be-all and end-all, if you like, for solving the issue of tail biting.

The ACTING CHAIR: Thank you.

John PLUSKE: Sorry, if I can just add, it does interact with other factors as well. It is not a standalone type of behavioural pattern. There are interactions with all the other factors involved in raising pigs too.

Bev McARTHUR: So would there be tail biting on a free-range farm, potentially?

Chris RICHARDS: It can occur, yes.

Bev McARTHUR: Yes, right. Okay. I am just interested in the biosecurity – the worm outbreak. Is there any chance that the 91 farm invasions could have led to this roundworm outbreak?

Chris RICHARDS: It is not something that we have really looked at, but we occasionally see outbreaks occur on farm that we really struggle from an epidemiological point of view to understand how they happened.

Bev McARTHUR: How they got there. I think one of my colleagues asked about the use of antibiotics. Could you elaborate on how carefully the pig industry uses antibiotics?

Kate SAVAGE: Yes, I think from a practising vet point of view – I am out on farm regularly – it is as little as possible and as much as necessary. Of course we are not going to leave pigs untreated, that is not a great welfare outcome either, but it is not going to be thrown in their – many, many years ago different industries used them for growth promotion and things like that; that is just completely gone out of our industry now. Antimicrobial stewardship, as it is called, where it is about responsible usage et cetera, is a large part now of our education as vets. When we go to conferences, there will be a whole section on antimicrobial stewardship and how we can do this better and refine our practising. The Australian pig vets created prescribing guidelines for anyone who is treating pigs or interacting with pigs – this could be mixed practitioners seeing someone who has got a handful of pigs on a small property. They wrote these prescribing guidelines to actually lay out industry best practice around antimicrobial usage. I am not aware of other groups that have done that or other species, but I am happy to be corrected on that.

Chris RICHARDS: It is a huge focus of all veterinary groups, not just in the livestock sector but in companion animals as well. As a veterinary group we actually invested in a diagnostic lab and vaccine company a few years ago, on the basis that we need to really focus on alternatives to antibiotics as well as monitoring the use of the antibiotics that we do have in play.

Bev McARTHUR: So is the issue getting into the food chain – is that the issue with antibiotics?

Kate SAVAGE: If you are going to use any kind of medication, whether that is antibiotic or pain relief et cetera, the product has to go through rigorous testing to demonstrate how long it takes to be removed by the pig from the pig's body. That then gives us what is called a withholding period, so we know that after treating an animal with that medication, it takes this amount of time before it is out of the pig's body and then it is safe for human consumption. We have pretty strict testing requirements to establish the withholding period of the medications that were used, and that is part of the concern the Australian pig vets were talking about earlier, that it is difficult to get products to market. We have to go through a lot of testing in order to use them in Australia.

Chris RICHARDS: And the big driver of course is we want to reduce potential antibiotic resistance. We are quite fortunate now with some of the new products that have come to market in the last 10 or 15 years that have enabled us to use a lot less antibiotics by having new molecules and things like that.

Kate SAVAGE: And there are a lot more vaccines now than there used to be.

Chris RICHARDS: A lot more vaccines as well, yes.

The ACTING CHAIR: Dr Pluske, did you want to add to this topic?

John PLUSKE: Yes, thank you. Just with respect to some of the projects that we are supporting, certainly antimicrobial stewardship and reduction in antibiotic use is a major theme. We have two major projects, we call them transformational projects, the first one looking at – and Dr Richards just alluded to it – in-feed and in-water type alternatives to using antibiotics in the post-weaning period after that pig is weaned, and another project looking at mapping antimicrobial resistance over time and reductions in antimicrobial use across commercial farms. Certainly anecdotal evidence would suggest that over time antimicrobial use has come down. In some cases it has come down significantly because of the uptake or the use of alternatives and more attention to factors such as biosecurity.

The ACTING CHAIR: Thank you very much, Dr Pluske. That brings us just about to time, so thank you very much for attending today, providing your submission and being available to the committee to answer our questions.

Witnesses withdrew.