



COMMONWEALTH OF AUSTRALIA

Official Committee Hansard

**HOUSE OF
REPRESENTATIVES**

STANDING COMMITTEE ON AGRICULTURE, FISHERIES AND
FORESTRY

Reference: Impact on agriculture of pest animals

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CANBERRA

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HOUSE OF REPRESENTATIVES
STANDING COMMITTEE ON AGRICULTURE, FISHERIES AND FORESTRY

Wednesday, 11 May 2005

Members: Mr Schultz (*Chair*), Mr Adams (*Deputy Chair*), Mr Martin Ferguson, Mr Michael Ferguson, Mr Forrest, Mr Lindsay, Mr Gavan O'Connor, Mr Secker, Mr Tuckey and Mr Windsor

Members in attendance: Mr Adams, Mr Martin Ferguson, Mr Michael Ferguson, Mr Forrest, Mr Lindsay, Mr Gavan O'Connor, Mr Schultz, Mr Secker, Mr Tuckey and Mr Windsor

Terms of reference for the inquiry:

To inquire into and report on:

The impact on agriculture of pest animals.

WITNESSES

**PEACOCK, Dr Anthony John, Chief Executive Officer, Pest Animal Control Cooperative
Research Centre 1**

Committee met at 5.18 p.m.**PEACOCK, Dr Anthony John, Chief Executive Officer, Pest Animal Control Cooperative Research Centre**

CHAIR—I declare open this public meeting of the House of Representatives Standing Committee on Agriculture, Fisheries and Forestry inquiry into the impact of pest animals on agriculture. Today the committee will hear from Dr Tony Peacock, Chief Executive Officer of the Pest Animal Control Cooperative Research Centre. The committee will be holding a series of public hearings in Canberra during the rest of the budget sittings and will also visit Western Australia and the Northern Territory in July in relation to this inquiry. I anticipate that the committee will then be in a position to begin drafting its report and that the report should be finalised and tabled by the end of the year.

Although the committee does not require you to give evidence under oath, I should advise you that these hearings are formal proceedings of the parliament. Consequently, they warrant the same respect as proceedings of the House itself. It is customary to remind witnesses that giving false or misleading evidence is a serious matter and may be regarded as a contempt of parliament. Do you wish to make a brief statement in relation to your submission, add anything to your submission—which was prepared some time ago—or make some introductory remarks?

Dr Peacock—I would like to make a few very brief opening remarks and then hand back to you. Thank you for the opportunity to appear in front of the committee. Our submission was made over 12 months ago, so I would like to start by reporting to the committee that there has been some really good progress since that time—in our area, at least. I will discuss a few of those things. The Australasian Invasive Animals Cooperative Research Centre has been funded by the Australian government through the Department of Education, Science and Training. All states are now committed and there are six international participants—40 participants in all from agriculture and environmental areas. From 1 July, these parties will be working together towards 13 operational targets on invasive animals. Together, they have committed almost \$100 million over the next seven years in R&D for pest animal control.

Secondly, through the national resource ministers committee system we have seen the commencement of a national strategy for pest animal control, along with an examination of the whole biosecurity system. That was one of the big requests in our submission. For a group that is doing R&D, like us, setting out a national plan is really important. It helps us enormously in moving forward and setting our own R&D priorities if we can get a picture of what the states and the Commonwealth want done as priority R&D issues. The new CRC will support that initiative as strongly as we possibly can, and if we need to adjust our research program we will do so accordingly.

There are also very strong signs that industries are recognising producers' calls to do more. I returned from Adelaide an hour ago, after a meeting with Australian Wool Innovation Ltd and Meat and Livestock Australia in which we were looking at what needs to be done in rabbit research. There has been a decade of control and benefit from the calicivirus and now they are looking at the next phase. As you are probably aware, rabbit research virtually dropped off the agenda after the impact of the calicivirus but people are now looking to the next phase in that area, and the R&D is starting to produce some good results.

I will now go to the props. Our CRC—the current one—switched from exclusively long-term research on biocontrols three years ago to go to a more portfolio approach to our research. We are now delivering some shorter-term research outcomes. I have a few examples of these. We have just launched this product through our spin-off company with the support of Australian Wool Innovation. It is called FeralMone, a spray attractant for dogs and foxes, and it improves the efficiency of baiting. When you put out 1080 baits, only a certain number of them are taken by foxes. In Western Australia, because the native animals are quite resistant to 1080, they have the ability to surface bait. In Eastern Australia we cannot do that. Baiting is quite an intensive operation. You have to bury baits, and that is labour intensive, so you want every bait to be effective.

What we did was to bring together the research. We ended up canning this attractant. It has a rather repulsive smell. It is synthetic fermented egg. I did declare it to the Australian Protective Service staff on coming into the parliament today. I suggest that committee members do not actually open it. This is an empty can that I brought in case they did not let me bring a full one into the parliament. But, if you take the top off that, there is a bit of blotting paper with it on but do not stick it right under your nose. That is an attractant for dogs and foxes. It is pretty gross. It is synthetic fermented egg, so there is a hydrogen sulphide component. Doggers and other people can buy it for \$24.95 or so from rural suppliers and put it on their baits. It has been known for 30 years that it will attract dogs, but it cannot be used if you have to decant it because if you spill that on yourself you will have no social life. The innovation is not high tech; it is putting it in a can.

Mr WINDSOR—How long does it last?

Dr Peacock—It lasts for several weeks as a dog attractant. Foxes are very good at finding baits. If you have a lot of foxes, you will not have a lot of baits untaken. But dogs are not particularly good at finding baits, so this helps them find them and it is a more efficient use of everyone's resources. The second prop which I will pass around strangely enough stinks too.

CHAIR—Leave it in the packet!

Dr Peacock—Yes, I will leave it in the packet. This is a new one. Some of you may have seen the *7.30 Report* last week, which did a story on this product. Out of a feral pig workshop in Cairns two years ago, we were commissioned by Meat and Livestock Australia to produce a shelf-ready bait. In New South Wales and most southern states, people now bait with grain maybe fermented with 1080 poison. In Queensland they tend to use meat baits and aerially drop them. That is a very labour-intensive issue again. You have to go and shoot roos, feral horses or whatever and make up your baits. Then you have to get an authorised officer to come out and inject the baits. That poses a big risk to us if foot-and-mouth breaks out or if we need to kill a lot of pigs in this country very quickly. At the moment we do not have a shelf-stable bait. This bait has now been field trialled in four states. It has knocked down about 80 per cent of the pigs in the area, and there have been very few, if any, non-target issues. At the moment, it is used with a 1080 poison. You can see that a gel is injected in there. The medium-term research is to try to find a poison that is more specific to pigs so that we can use it more readily and, again, more cheaply.

CHAIR—What is the cost per unit?

Dr Peacock—That will be made available through Animal Control Technologies Australia, which is a private company in Melbourne. We have been working with them on this to fast-track it. It will probably be in the order of \$2 a bait. It will be a significant reduction on the current costs.

Mr TUCKEY—What is the outside part of the bait? Is it a grain substitute?

Dr Peacock—There are about 11 herbs and spices in it. The smell that you are getting is a fish smell. You cannot use any meat because of the BSE issues. We cannot put meat out in paddocks. So it is a fish and grain base, but there are proprietary issues related to that as well. They do not even tell us. It is made in a salami maker, so that is how they get it ready. So that is the second prop. I expect that to be registered, available and launched in 2006. It is very expensive and time consuming to go through the registration process. But what we as researchers are getting better at is planning for that right from the inception of a project.

The third prop is an additional toxin to 1080. Three years ago Australian Wool Innovation supported our CRC in looking at a new poison. It has actually been around for quite some time—the shortened name is PAPP. It binds up the haemoglobin in the blood and produces methaemoglobin, so dogs and foxes will effectively just go to sleep from it. That work has advanced extremely well, and on our current track that poison will be registered in 2007. Again, people need to realise that these sorts of projects cost \$1 million-plus. That one is a \$3½ million project. It does not just cost a couple of hundred grand to find out if it works; we are taking it all the way through to having an additional poison. The advantage of that will significantly lower the cost of going after dogs and foxes in eastern Australia. It will not really make a big difference where you can already surface bait with 1080, but it will give us another poison out there.

When we put our heads together we get a better result than we had in the past. The new CRC has a motto: together create and apply solutions. We believe that bringing people together for the planning and the execution of R&D and the execution of control programs is an absolute imperative. Pest animals always beat us when we work alone, either as a nation on R&D or in local control programs. So the key issue for us is bringing people together to work in groups, whether it is in the R&D area, where we have a very low critical mass of researchers, or in control programs, where one landholder's actions are negated if the neighbours are not doing the right thing. We need to draw in other groups, like horticulture and forestry. We have seen that the grazing industry is back in support of rabbit control, but of course other industries have benefited enormously from their earlier investment in calicivirus, which we now always refer to as RHD.

We also need to be creative. The cost-benefit ratio of myxoma virus and rabbit haemorrhagic disease is probably the best for any R&D in any sector in Australia's history. I defy anyone to show me a better return on investment than we get from those. Calicivirus has probably returned the nation in excess of \$5 billion in the 10 years it has been out there. We also need to apply the solutions. So often, finding more carrot and less stick is likely to get a result. Just relying on state legislation that obliges landholders to go after pests on an individual basis is not achieving what we want. Pest animals cost Australia at least \$720 million a year. Compare that with the \$400 million a year that salinity is eventually going to cost us. We really do need to concentrate more on our control programs. Once we have a national pest animal strategy, we should support it as strongly as we can. I think you will see real benefits coming out of that for the nation. I will stop there and invite questions or discussion.

CHAIR—Thank you very much, Dr Peacock. At the outset, could I say that what you have just demonstrated to us in terms of the new products that are coming on the market is very gratifying, given the evidence that this committee has heard so far across the areas that we have visited. There are significant problems in the availability of what is referred to as natural baits. There is legislation on a state by state basis that can affect the availability of bait and people have to go interstate to get it. So it is very pleasing to know that things are coming onto the market that are going to help that. That is complementary to the research and development that is being undertaken and it is great to know that once again our scientists and researchers are well to the fore in offering those sorts of facilities. I make those points to get them on the record and acknowledge the work that has been done.

I was going to ask you some questions about why you focus on rabbits, foxes, mice and carp, but you obviously do not because you talked about baits for pigs and dogs today, and that is very pleasing because dogs in particular are a significant problem for people in rural and regional areas. In relation to the national pest animal strategy, if we were in a position to set up a national controlling body, what would your ideas be in terms of the make-up of that? How do you envisage it working?

Dr Peacock—My own thoughts are that you need something akin to or even a part of Biosecurity Australia, so that we are looking at weeds and invasive animals being as well looked after as disease in the country. We do a very good job on quarantine and we put a lot of effort, time and money into it. We need to take a similar approach on weed control and pest animal control. Whether it would be something of that order, I do not know. It is a little bit different, because more of our problems are to do with things that are already here, rather than keeping them out, but there are still very significant problems there. In R&D we end up finding ourselves almost in the lead agency sort of role, and I am not sure that that is the best arrangement.

My view is that R&D should always be there to serve the leaders. I do not think we should be the leaders of the issue. With the new CRC we are the most well resourced group in the country by a huge margin in terms of our ability to get things done and whatever. We have tried to set it up with a service mentality so it will go beyond the seven years of federal money. Virtually all the control agencies in the country at state level are members and we have to prove to them that we can deliver innovation so that they remain members down the track.

Mr TUCKEY—It sounds like a good idea to me.

CHAIR—In relation to the national pest animal committee, organisation or department—or whatever you like to call it—do you think that it should have incorporated in it the flexibility to assist in and promote the harvesting of some pest animals, particularly native pest animals that are creating a serious problem? For example, in Tasmania they harvest possums and wallabies to a small degree for export. Do you think we should be looking at that seriously?

Dr Peacock—Yes, I should have pointed out to you that we took that attitude in the new CRC, so we can include over-abundant natives in the term ‘invasive’. Part of the reason we changed the name from ‘pest’ was that some of these things are resources that need to be managed. When you look at the Great Artesian Basin areas of the country, you will see that water was not throughout that area until we tapped the water from underneath and put it there. Kangaroos were not there in the numbers that they are now. We have changed the entire ecology of that vast area

of the country with many more native animals than were ever there in the past. You cannot just ignore that fact because they are native.

We take the attitude that commercial harvesting will sometimes have a strong role to play. It is difficult and you need to include it but we are not keen on, for example, bounty schemes because they generally do not work. I think New South Wales has gone a bit too far in trying to get the Game Council to control feral animals and I think they will run into problems with the deer situation. There is now a real tension between controlling deer because they should not be there and the need to have them there for people to hunt. So you have to be careful what you set up, but you cannot exclude commercial control. If you can get something back for that resource rather than just leaving it on the ground you should do so, in my view.

CHAIR—Do you have a model in mind on the point you just made about harvesting?

Dr Peacock—No, every state is quite different in its attitude, and I think we are in a ‘wait and see’ mode with New South Wales. It is quite recent legislation; the Game Council have only just been set up and we will have to see how it works. They have a responsibility for feral animal control—the act is called the Game and Feral Animal Control Act—but most feral-animal controllers think that will not have any impact at all. I think we have to wait and see—it may well have an impact if you can harness the resource of recreational hunters who are willing to hunt for no reward. Often it becomes a confusing factor, as we hear of hunters who seed back into other areas because they do not want to drive as far, and those sorts of things. But you cannot paint everyone with that brush; obviously that is just a rogue element.

Mr WINDSOR—Do you have any evidence backing up those assertions?

Dr Peacock—There is DNA evidence from Western Australia, where pigs have been taken from north of Perth to south of Perth. That is the only DNA evidence that I am aware of, but it is often asserted.

Mr WINDSOR—That they are creating their own stock to go back and hunt?

Mr TUCKEY—For hunting purposes.

Dr Peacock—Yes, rather than driving for six hours to go hunting, they might go two hours for the weekend.

Mr ADAMS—There is no evidence of that with kangaroos, wallabies or anything?

Dr Peacock—No, I have never heard of it with kangaroos and wallabies. It is with feral pigs and deer. Game officers will tell you that in the Blue Mountains pubs on a Sunday afternoon you will see sucker pigs that are feral and not meant to be transported. There is legislation saying you cannot do that, but clearly people do from time to time. How much, I do not know, but it does not take many people doing it before you have a problem.

Mr TUCKEY—The National Parks and Wildlife Service is constantly claiming that the reason they rip up their old fire trails is to stop people creating feral animal populations in their

forests. I find it a rather lame excuse but, on the other hand, I assume they must have some evidence of it.

Dr Peacock—I have often asked why we have not got a culture in those game offices like the one we have in the fisheries departments. If somebody gets caught at the pub with a pig, it should be like those doing the wrong thing when fishing: they are pinged straight away. Every officer carries a video camera and takes evidence, and the people are fined. There is not that culture with pest officers.

Mr TUCKEY—That would be better than ripping up the fire trails, wouldn't it?

Mr ADAMS—To pursue that further, I take it that the CRC will look at management regimes so we can get to game management areas and use the facilities so those animals can be knocked down and used in a commercial way.

Dr Peacock—We have freshwater fish, and we have a big terrestrial program—and within that we will be funding research into commercial use of animals, because you have to design schemes that are appropriate to get the end result. As I said, there is a lot of doubt about that. I do not think anyone has a definitive answer. I know that with deer management in Scotland, you would assume you should always take the bucks. When they did research they found that if you target particular animals you can satisfy the hunters, the environmentalists and the agriculturalists. You can keep the numbers down but still have something to harvest.

Mr ADAMS—It is all about management doing it in a manner that gets the results that you want.

Dr Peacock—We cover the whole spectrum; we have people involved who regard every introduced animal as feral. So, once we get rid of carp, let's get rid of trout. If you want to disengage my community of trout hunters you say something like that to upset them. You would have people who say we should not have cattle here, but you have to be realistic.

Mr ADAMS—That leads me to the last question I want to ask you. There is an educational role to be played. We have a bit of a debate which seems to be all over the shop. I know that you have some sort of educational role in your CRC for what you want to achieve. Could you comment on that?

Dr Peacock—We certainly have an educational role at postgraduate level, but I am not sure that is what you mean.

Mr ADAMS—No, I was talking about public education.

Dr Peacock—We have established a web site called feral.org.au. We are trying to get all of the agencies to keep that up-to-date as a sort of a reference point for the public and also for researchers and controllers around the place. All CRCs do our bit and we have two communicators in the system that are talking. In the new one, because we have so many members, we are trying to use the state departments or whatever to get a consistency of message across. But, as to that *7.30 Report* program last week, you do get some hate mail from animal welfarists and you get it from bow hunters—

CHAIR—We get it from everyone!

Dr Peacock—Yes, you guys are used to it; I am not! It goes along right across with people's attitudes to animals. With the urbanisation of the population, people do not understand why we kill animals. The RSPCA is actually a good supporter of our CRC. They will come and give public talks. They will say, don't forget that they kill a lot of animals as well. It is a legitimate way of controlling urban populations of animals. Until we find better methods to do it, it is a fact of life.

Mr TUCKEY—I have two questions. The first relates to your passing remark as to the dates for implementation of some of your presumably successful inventions and the regulatory regime. I wonder if you would expand a bit on that in terms of whether, with due process, that could be truncated. You said, 'We're getting better at it.' In other words, I assume you are starting to know where the hoops are that you have to jump through. Assuming that that regulation and registration et cetera is a government entity process, where could this committee recommend that that be made, if possible, more efficient so that good products get on the market 12 months earlier than otherwise? Secondly, you have mentioned new legislation in New South Wales. That was somebody else's idea. Admittedly, as was explained with Western Australia's animals, Indigenous species are tolerant of 1080. But is there grounds for a more harmonised regime in terms of these practices?

Dr Peacock—On your first question, the FeralMone product does not need to be registered, but the PAPP product does. The inventor thought of FeralMone in November 2003, so that took 18 months to get onto the market. For the PAPP it will be more like four years and the quantum of money is huge. The regulatory authority is the Australian Pesticides and Veterinary Medicines Authority and we have to register a poison like that.

Mr TUCKEY—Why do they take so long?

Dr Peacock—It is because of due process and it is user-pays. There is severe criticism of that authority in terms of the calicivirus bait. That is not a registered product at the moment. That has been in front of them for five years.

Mr TUCKEY—And they have not got around to registering it yet?

Dr Peacock—No, but it is very close.

Mr TUCKEY—Thank God it escaped!

Dr Peacock—No, that is the actual bait form of it so that we can keep seeding.

Dr Peacock—When I am talking about the pig toxin product, obviously that needs to go through. It is also a classic area of market failure. There are no private companies that are singing out to do this. We work with a private company to get it manufactured. He can make it worth his while to produce the baits and get them out to the public, but there is no way he could bear the cost of the massive field trials we need to do. The field trialling for that is over tens of thousands of square kilometres—helicopter trials—

Mr TUCKEY—And what do they expect to learn from field trials of that nature—that it works?

Dr Peacock—Before you can register a product, you have to show that it works, that it is efficacious, that it is needed and that it is safe. Safety includes that of the humans using it and that of nontargets. In that case, you want to make sure that basically only pigs are taking it. That is a very expensive exercise to do.

Mr MICHAEL FERGUSON—What has been the cost of that four-year exercise?

Dr Peacock—It will be about \$1.2 million.

Mr TUCKEY—Do you personally believe that that cost is warranted, or could the community be adequately protected at a lesser cost? What sort of time—actual, real time—does it take to establish? Isn't that an area thing? You do not drop them outside kindergartens. Why isn't that someone cannot write a protocol that says, 'Yes, you can have approval for this, and these are the only places you can use it, because it might represent a danger to humans'? Otherwise, what is the problem?

Dr Peacock—You are exactly right. My personal view is that, yes, it could be truncated. We are registering that from scratch. Every time you have a new product from scratch, it is not compared with what is happening at the moment.

Mr TUCKEY—Like the distribution of other baits—1080 and so on.

Dr Peacock—Yes. At the moment, a farmer will organise his neighbours, they will rent a helicopter and they will go and shoot a heap of horses, butcher them up into chunks of meat and, with an authorised officer, inject them with the same amount of 1080 as is in these baits. They will throw them out of the plane. The registration process does not really take account of what is happening now. You are being compared with the position from scratch each time rather than with whether it is better than what is currently happening.

Mr TUCKEY—By its nature, looking at it, the fact that the bait is inside means that it is less likely for some kid or something to pick it up and suck it, isn't it? It is probably better.

Dr Peacock—It has been designed that way.

Mr GAVAN O'CONNOR—I have a few mechanical questions. Is that company that you mentioned the commercialisation arm of the CRC?

Dr Peacock—I mentioned two companies. The first is Pestat, which is a very small Canberra based company that was established as a result of the second version of our CRC. That has produced the product FeralMone with Australian wool industry support. The second is a Melbourne based company called Animal Control Technologies Australia. They produce about four million fox baits per year. They produce a product called FOXOFF and they produce MOUSEOFF, which is the mouse plague control product. They produce a series of products.

Mr GAVAN O'CONNOR—I just wanted to clarify that. I note that the number of participants in your CRC has increased from seven to 40. Do you have a list of those participants? Could you give us a general idea of who they are. I am interested in the process by which you snaffled all these companies, state agencies et cetera into this quest.

Dr Peacock—I came into the existing CRC four years ago. The board would not let us assume that we should go for a third term of the CRC. When it started it was very much the case that the CRC was doing immunocontraception in the rabbit, the mouse and the fox. They were the three things they did. It was very much a science based program. Over the years, it has evolved. My view is that you have to put these small products out and get short-term gains. I do not mind if we get there with baby steps, but you lose the support of your partners if you are not producing something.

What has been achieved in the science of immunocontraception in the last 10 years is exceptional, but you are talking about a genetically modified product. At the time it started, no-one was worrying about GMO food. But now people are, and we are talking about viruses. So it is exceptionally hard stuff to get out there. I am quite confident that we will either deliver on the mouse stuff or stop it quite soon. It will either work or it will not. But we cannot just keep going on with these things.

When I got in, we decided we should be much more of an open club rather than a bunch of science based people. Unless you have the on-ground control guys, it is less interesting. So we started to get them involved. It is the state agriculture department and the state natural resource department in virtually every case. We are missing the Northern Territory at the moment but we think we will fix that in the next few months. We also have six international groups. The US Department of Agriculture is a member. They face the same sorts of issues. This product has immediately become an export product. It is going to—

Mr GAVAN O'CONNOR—I was going to ask you about the potential for exporting that.

Dr Peacock—And that one is being trialled this month in Texas, so it will become an export product as well.

Mr TUCKEY—How many Yanks will use it before we get it?

Dr Peacock—It is not an attractive business to get into, so they are happy if anyone is willing to get into it.

Mr GAVAN O'CONNOR—So it is made up of international agencies, state government departments, resource departments and private companies?

Dr Peacock—We also have members ranging from the Cattle Council of Australia and the Australian Veterinary Association through to the World Wildlife Fund Australia.

Mr GAVAN O'CONNOR—So environmental groups?

Dr Peacock—Environmental groups as well. It is one of those areas where there is relatively little conflict. The agriculturalists and the environmentalists, by and large, want the same thing.

Mr GAVAN O'CONNOR—One of those companies is a private one. PESTAT is yours, is it?

Dr Peacock—PESTAT is owned by three of the partners in the existing—

Mr GAVAN O'CONNOR—Three of the partners. So the profits of—

Dr Peacock—It is actually owned by three universities.

Mr GAVAN O'CONNOR—I see. They put the money back into the—

Dr Peacock—I doubt whether the vice-chancellor realises; it would be well below his radar. It is not paying dividends or anything. Anything it earns goes back in. They take on jobs that the CRC could not do. They do a fair bit of consulting. They are specialists. They are getting much more into bird control. Pest birds are probably as big an issue again as the rest in economic terms and so they are getting into that.

Mr BRENDAN O'CONNOR—So \$100 million dollars over seven years is not a bad lick. I note your recommendation 5 states:

Include a joint pest animal research strategy in the Minister of Agriculture's priorities to rural R&D Corporations.

Which R&D corporations would you be most involved with now and what is the extent of your cooperation with them? Is this a way of you perhaps, firstly, getting the issue front and centre and, secondly, securing funds?

Dr Peacock—We get really good support from Meat and Livestock Australia and particularly from Australian Wool Innovation. The fish R&D corporation gives us a little bit of support in PhDs in the carp area. My concern is that, when you look at the impact of rabbits on the forestry industry or pest wallabies and possums and things like that, it is often a second- or third-order issue for their corporations. I used to run the pig R&D corporation and we put a little bit into this CRC. But they would not really recognise it. It is not really their thing. There is a case for the minister not to direct them but to say, 'With regard to the priorities, make sure you're supporting any national effort in this area in both weeds and pests.' It affects everyone.

Mr MICHAEL FERGUSON—I want to ask you a little bit about 1080. It is a question I have asked other people. Would you have some authoritative comments on that? Do you feel that—

Dr Peacock—I think that 1080 is an excellent poison. It should be out there. If we are looking for a new poison today, 1080 is a natural product derived from plants, it is relatively species specific to the ones we are targeting and its lethal dose for a human is huge, so it is a very safe product for us to handle. The welfare issue is always raised as well. My own view is that it is disturbing to see an animal die from 1080 poisoning. The animal thrashes around a lot and might take six hours to die. But for the vast majority of that time that animal is not sentient; it is not conscious. You are seeing movement that it is not perceiving.

Mr MICHAEL FERGUSON—It is distressing for the person who is observing.

Dr Peacock—It is much more distressing to watch, particularly if it is a farm dog. We get a lot of concern when somebody has inadvertently left this thing in the ute and the dog has taken it. We get farmers that say, 'I'll never use it again because I killed a dog and it was just too bloody traumatic.' The dog was probably not suffering but the person watching it was.

Mr MICHAEL FERGUSON—Is it possible that this may be happening to animals because the dosage has often been minimised in baits?

Dr Peacock—No, even with a strong dose it will still happen.

Mr MICHAEL FERGUSON—There is no real change?

Dr Peacock—No. It is a systemic poison, so it needs to go through the stomach, and then it starts acting. When I say they take a fair while, there are probably two hours before you will see any signs of distress. We pursue a line of research that we call Achilles heel research, where we are looking for new toxins that are more welfare friendly or perceptive, at least in the perception term, and will target particular species. You have probably all heard that cats are particularly susceptible to aspirin—they have enzyme pathways they cannot metabolise. We look for things like that. PAPP on dogs and foxes is the first we are taking through. Now that you can access all the patents, basically from the whole world, you can go back to old human drugs. In this case it was a drug that was being developed in the Cold War for therapy in humans against radioactivity poisoning. It works on the other side of blood to cyanide. It was investigated as an antidote for cyanide poisoning. We found that one. I think it was Pfizer who dropped it when it killed all the dogs on trial.

Mr SECKER—What is wrong with strychnine?

Dr Peacock—Strychnine is considered to be poor welfare.

Mr SECKER—It kills them in a couple of minutes.

Dr Peacock—It kills everything and it is very dangerous to handle. There is plenty still sitting around in cupboards.

Mr SECKER—I have not used it for a while, but I have used it.

Mr MICHAEL FERGUSON—It seems that everybody wants an alternative to 1080, if only for the reason that you have outlined in terms of the distress, either perceived or real, in the animal that has taken the bait. What is the realistic chance of an effective replacement or alternative for 1080 in the Tasmanian context, where the target species has been wildlife, such as kangaroo, wallaby and possum?

Mr ADAMS—But it also knocks down bandicoots and other things.

Dr Peacock—I am careful with my words. I did not say 'alternative to 1080'; I always say 'additional'.

Mr MICHAEL FERGUSON—I am sorry. In Tasmania it will have to be an alternative because the Tasmanian government have deemed that they will finish using it this year. Foremost in my mind is this notion that Forestry Tasmania, being one of the biggest landowners in Tasmania, or the Crown, will become a bad neighbour because of the increased difficulty of its management of pests.

Dr Peacock—I do not know, because we have never looked at it. In the short term I think we will be looking more at repellent type things. This same substance supposedly will repel certain animals; it certainly repels me. But it is not economic in that situation, because it is not going to persist. You are trying to protect the part of the plant that is growing fastest so that it is least affected. We have had discussions. Only last week I met with the feral animal manager for Forestry Tasmania. He probably has the hardest job in Australia at the moment; it is a big ask.

Mr MICHAEL FERGUSON—Do you think it is foolish to announce the phase-out of a poison before you have a viable alternative? You are an authority on this; that is why I am asking you.

Mr ADAMS—I do not think that is a fair question.

Mr MICHAEL FERGUSON—It is a fair question.

Dr Peacock—Sometimes you have to set yourself goals. We have been involved in the Tassie fox situation, and I know down there how hated 1080 is by the public. When the fox situation occurred, we advocated strongly that it was the correct thing to do. I copped a fair bit of media down there as being an advocate of 1080, and we are talking about what is potentially a major conservation issue. It is very hard to have a sensible debate about 1080 in that environment where there are such extremes of view. But clearly, on the evidence I have seen, the forestry industry in Tasmania and in many part of the world—it is not unique to Tasmania—needs to control browsing animals. Those animals are filling the same niche as deer in North America. So there is experience elsewhere where an equal number of problems need to be solved. They are going to be interested in non-lethal issues, but we would not come up with a non-lethal control for those animals in the short term.

Mr MICHAEL FERGUSON—Before the end of December this year?

Dr Peacock—There has been a marsupial CRC. Obviously, non-lethal control of possums is a major research topic in New Zealand, where there are 80 million Australian possums eating out their native vegetation.

Mr ADAMS—They spend \$NZ120 million a year knocking them out.

Dr Peacock—That is correct. Basically, the principal activity of the New Zealand Department of Conservation is killing possums.

Mr TUCKEY—I came back a minute ago to your reference to an alternative poison. Is that more dog specific? It is not an alternative for these other rodents.

Dr Peacock—No. With ours, it will target the family carnivore. We hope that eventually we will be able to use it for feral cat, feral dog and fox control, with no concerns about poisoning quolls; that is the big issue in eastern Australia. Then you can do what they have been able to do in Western Australia, which is bait large areas aerially. They get a massive restoration of wildlife in that situation; it is very clear.

Mr WINDSOR—You spoke earlier of problems with birds. At the moment, in one of my communities I have a particular problem with starlings and the ability to remove them or get them to move. Is any activity occurring on that level to deal with that problem?

Dr Peacock—We have just started our first bird work. We have not been involved with birds, but there is definitely a demand because no-one else was doing it in a comprehensive fashion. There is a poison called Starlicide that is registered in the United States and New Zealand.

Mr WINDSOR—For urban use?

Dr Peacock—For urban use in the States, yes; I am not sure about New Zealand. We have just received support from the Bureau of Rural Sciences to test that in Australia against a range of species, but our particular concern is the movement of starlings across the Nullarbor Plain. That work has just commenced, but we have no data at all on whether it affects Australian native birds. Starlicide has been registered in the US for quite some time, and this is where we have had liaison with the US Department of Agriculture. They have a huge wildlife research centre in Colorado. As all their filing cabinets and expertise are available to us, we can access the original data and things like that and thereby try to cut the costs of these sorts of exercises.

Mr WINDSOR—Is it possible for the committee to have the US information?

Dr Peacock—I can give you a fact sheet about it. The commercial name of the product is Starlicide. We are also interested because starlings are quite related to Indian mynas. When the ABC did *Wildwatch* the Australian public regarded Indian mynas as the number one feral in that exercise.

Mr WINDSOR—How do you conceive of getting rid of the feral pig? It is obviously the greatest potential economic danger to this island. Do you see a way of ever getting rid of it, perhaps through genetic manipulation or a calicivirus in the pig?

Dr Peacock—There have been discussions about that but there has never been research into the use of genetically modified diseases for the feral pig. The problem is that there is a large, existing domestic pig industry that is worth a lot of money and a lot jobs. I happened to work for them for 13 years before I got this job. When I came in, I stopped discussion in that area because I cannot see the domestic pig industry ever agreeing to having to vaccinate their own animals against something. You would have major trading issues in that area.

The big thing about pigs is that they must access water every day or they die. That is different to many other animals. In relation to pigs, in the large areas where people are closing down bore drains for water conservation we should be making sure we try to enclose the waterholes. There is a young PhD student at the University of Queensland who now has facial recognition software set up so that, when an animal goes to a waterhole, the software can say whether it is a pig, a

goat, a sheep or whatever. If it is a pig, it shunts it into a secondary pen and it emails the farmer to say: 'There's a pig in the pen. Come and do something about it.' He is developing that. He does not want my support in the CRC; he is a very independent guy. I would like to fast-track that research, because he has all sorts of problems. You have to get the pigs to go in there one by one; that is his main problem. But two or three weeks ago he showed me on video that this stuff recognises a goat and a sheep. It can distinguish them from each other in profile.

Mr TUCKEY—We might be able to use that at customs on people.

Dr Peacock—It actually comes from facial recognition software. It is a spin-off from the defence area. He is doing a terrific job. I think that will also be a major way of controlling kangaroos in those areas. You would not exclude them from water, as that would be a PR nightmare, but you could put in a secondary pen to shunt them into. Because of the ability to do this, you could then get a better handle on how many roos are in an area, as they move in such large areas. I suspect that will help. Then we talk of bands and about trying to separate our pigs. The main thing with pigs now is that they cover 40 per cent of the country and we need to make sure they do not go to 60 per cent, so we need to limit them to the areas they are in now and we do need to make sure we are getting every form of control that we can.

My colleagues are always against eradication. When we did that pig workshop in Queensland, the word 'eradication' got discussed for nearly half a day. The Australian Veterinary Association have passed a resolution that they would like to see an eradication campaign for pigs. They say, 'If we can give rid of TB and brucellosis, we can get rid of pigs.' There is a school of thought that says you can do it. The difficulty is that, with a disease, if you can get it down to a certain level it drops to zero itself because it stops transmitting. That does not happen with animals so long as you have two left. Getting those last ones becomes so economically difficult that you cannot do it. But you can certainly talk about local eradication campaigns and things like that.

Mr ADAMS—Somebody was using sound as a way of keeping animals away from where they are not wanted. How much work has been done on that?

Dr Peacock—Very little research, to my knowledge. They are usually a product like this so they do not require registration. They have not gone through the exercise of seeing whether they are efficacious and whether they work. To my knowledge, there is virtually no credible research at all on soundwaves having any impact on rodent control and things like that.

Mr ADAMS—Evidently, when the tsunami hit the islands in Indonesia, the animals had already moved out.

Dr Peacock—I am unaware of that.

Mr ADAMS—Nobody has looked at those sorts of things—there is no research written up?

Dr Peacock—Not in any measured way. I would not discount it. You can make animals very uncomfortable with certain sounds that we cannot hear. Whether they habituate to it is the big thing.

Mr TUCKEY—That is not eradication, is it? That is just telling them to go somewhere else.

Dr Peacock—It is not a control. We have not done much of that because, by and large, our issues are not just about shifting from my property onto yours; they are about how we get rid of these things. In the Tasmanian situation, it may well be that we just want browsers off a particular crop for a certain time. If we can get it above a certain height, we do not have a problem any more. There is a bit more interest in this sort of area of repellents and what have you. It is often the same with birds. You can go and shoot at them, but gas guns become ineffective very quickly.

Mr ADAMS—They do. Apricots.

Dr Peacock—Israeli research shows that, if you kill a few birds, they associate it with death and stay away. If you kill too many, they take their chances and stay.

CHAIR—They just go somewhere else, don't they?

Mr ADAMS—My grandfather used to hang them on the fence.

CHAIR—What do you see as the role of the Vertebrate Pest Committee? Should the Vertebrate Pest Committee or some similar body have statutory control over all pest animal activity in Australia?

Dr Peacock—I think the Vertebrate Pest Committee know my view that they have been pretty ineffective. Partly, that is because they have no secretariat, so they rely on the goodwill of the state that is hosting them at the time as to how much activity goes on. There is not a good history of states working together on feral animal issues. It was forced on them for calicivirus, and it worked very well. We had a very good campaign in terms of the way it happened. I would like to see them being much more effective. I think the Australian Weeds Committee are much more effective and, partly, that is because they have a one-person secretariat that can make sure things are happening. The other problem with the Vertebrate Pest Committee is that they are not representative of the whole sector—it is only the Australian government—and pest animals are everyone's problem. You need some way of getting the private landholders more involved.

CHAIR—Leading into that, what would your suggestion be? What sort of a model could you put in with a mix of people?

Dr Peacock—My own view would be that, probably under Biosecurity Australia or something like that, you should be supporting something along the lines of an invasives group that deals with both pest animals and weeds. The issues are often very similar. Certainly, if there were some sort of driver or incentive for them to work together—for example, if two states work together, they will access a fund or something like that—that would be more effective. But I would be concerned if the industries are not involved. I know the Cattle Council of Australia is very strong on this issue. At the end of the day, if you do not have the Kidmans and everyone else involved, you are not going to get effective control. Most of those landholders would not know there is a Vertebrate Pest Committee, I do not think. It is basically a coordination committee for information exchange among relatively mid-level public servants. It does not have any authority at the moment.

CHAIR—So what it costs to run should be diverted elsewhere?

Dr Peacock—Yes.

Mr FORREST—I have an observation. What we have heard from you today, Dr Peacock, has been encouraging. Your CRC is about to evolve with a new name. I do not want to be cynical, but some people think if they change the name they will therefore be more effective. The emphasis a decade ago was to find immunocontraceptive means. My perception is that that has become too hard because it is just too hard to get them introduced and that you have now gone back to methods you know that work—back to baiting. Is that a fair observation?

Dr Peacock—No. What we have tried to do is to take a more portfolio approach, so that we still have the immunocontraception in there or other long-term continental scale levels. We were reminded at the rabbit meeting just yesterday by the CEO of Kidmans that, for one-third of the continent, where there are rabbits there are basically no people. There are very few people out in those areas, so the only effective rabbit control then is disease. They cannot do anything else. Even if I have an incredibly low-cost bait, there is no-one to apply it.

I think we do need to keep that on the agenda. The trouble is that the industry has become frustrated. You cannot have 10-year or 20-year research programs that do nothing else. They have to be encouraging all the time and improving on our current methods as well. That is what we have really tried to go on. The issue is that you need to have a national plan. The Department of the Environment and Heritage only gives out one-year grants. The CSIRO division of wildlife was established for the purpose of putting myxoma virus out there, and it ceases from 1 July to have a wildlife component. CSIRO will not put money into an area unless there is some other support; it will not do it on its own. Having said that, the department of the environment has been very good to our CRC and has supported the fox work. But it would be much more effective, instead of giving us 10 one-year grants, to have done it in two five-year grants. Nobody minds being reviewed—and you need to have really strong review on these things—but obviously you are not going to come up with an—

CHAIR—No, you have to have the confidence to go forward.

Dr Peacock—I lose a lot of staff in that area.

Mr FORREST—At least triennial, if not every five years?

Dr Peacock—Or, if there is a plan, you can say that an immunocontraceptive or a disease is on the national plan. The best example of this is the Murray-Darling Basin Commission. They have a 50-year native fish strategy. Obviously, they do not fund it for 50 years, but the researchers can see where they fit in. We managed the daughterless carp project. It is very high-risk research, but if we can crack it there will be an enormous return. The way I keep researchers motivated is to show them that that is where they fit in, that they are not just some guys working on a one-year project and next year they could be working on something completely different. If you want to get the people motivated, you do need to say, 'Our national motivation is to eradicate the pig.' With carp, we do say: 'The goal of the carp program is to eradicate the carp from Australia. We do not want it here.'

Mr FORREST—But before it becomes a resource?

Dr Peacock—At least with that technology you can actually have both—you could have it as a resource as well.

Mr FORREST—Just reassure me on the third name change. Is it simply to reflect the recognition that this is a resource rather than just a pest?

Dr Peacock—Using the word ‘pest’ is a problem. We have a problem with our names. Originally the CRC was called the vertebrate biocontrol CRC, but Joe Blow does not understand what that means. A lot of people do not, and why would they? If you use the word ‘pest’, you get a lot of people ringing up wanting a quote for their termite control. So people do not understand what that means either. We have tried to use the term ‘invasive’. That is a more internationally used term. When we were working with USDA, we found that they do not refer to ‘pest’ animals, by and large; they talk more in terms of ‘invasive’ animals. We added to that because in the classical invasive sense an overabundant native that is still in its natural range would not be classified as invasive, but we say that we do include them and we need to do something about that situation.

CHAIR—In relation to 1080, if we can go back to that, would you agree with the evidence that the committee has received that native species in Western Australia have a tolerance to 1080 because the strain of the poison occurs naturally in native flora in that state?

Dr Peacock—It is not in the whole state—it is in the south of the state.

Mr TUCKEY—It is in the south-west land division.

Dr Peacock—Yes. It is very well documented. It occurs across the south of Africa as well, where a lot of those plants occur. That has given them a distinction point. The Western Shield program, which baits I think double the size of Tasmania every year, four times a year, is a world-class example. It has rescued two species we can name off the endangered list. That hardly ever happens.

Mr ADAMS—And they have just got a new bait that is cutting the cost down?

Dr Peacock—It is the same one I was talking about. The head of Conservation and Land Management Western Australia—this is exactly on your point—said: ‘It costs us \$4 million a year and that is a forever cost. If we stop for a year, the foxes will come back.’ So that agency is the most encouraging of us continuing with our fox immunocontraception. In the long term, they still want some better way of doing it, because it is still a very expensive way of managing the land.

Mr WINDSOR—I would just emphasise a point that you made earlier. I think it is very pertinent to the promotion of advertising of some of your programs. You said that pest animals had an annual cost of about \$700 million. Salinity is about \$400 million. But there is a difference in the magnitude of the way those two issues are presented to the public and what the potential costs and downsides are. Both are reversible. Salinity, some people would argue, is reversible or can be reversed if there is enough money spent. I think it is important in the promotion of your activities that we actually get that message out there. This is up there and in front of what is

considered one of the major problems in regional Australia—that is, salinity—and we need to do more.

Dr Peacock—The WWF, the Weeds CRC and we are launching a little booklet for every parliamentarian in the country—for you and also for state members—to try and get that point across. Salinity will eventually take out 16 million hectares of productive land.

Mr TUCKEY—Not if we drain the land.

Dr Peacock—But weeds are already affecting 25 million hectares. Salinity has about a \$400 million cost, but weeds already cost the country \$4 billion. The WWF have been very good supporters. Once you get past habitat loss—and we have either lost the habitat now or it has been preserved—invasives then become your No. 1 biodiversity issue. Australia has lost more native animals than the rest of the world combined in the last 200 years. Our extinction rate is really high. The fox is responsible for at least 11 of those extinctions. It is a major issue. The other point we try to put across in many areas of research is that it is a uniquely Australian issue. We do two per cent of the research, but we can rely on the other 98 per cent of world research to inform ourselves. In this area we are on our own and we end up being the world leaders. We are helping the USDA with their programs and things like that, because everyone is suffering from low critical mass.

Mr TUCKEY—I want to put a matter on the record subsequent to a comment made earlier. The Aboriginal affairs committee is looking at Aboriginal employment. I think we should be passing them the advice that there are parts of Australia that nobody goes to to address the rabbit population and other invasive species. Our committee should draw it to their attention, and they might look into making some recommendations to some of these isolated communities, which are left there at the moment with petrol sniffing and nothing to do.

Dr Peacock—We get that feedback from mining companies that have a lease. They say, ‘If we take that lease, we’ll only employ 30 people in the mine but we’ll inject a lot of wealth into the local community.’ They say, ‘We could help with Landcare training: would you be interested?’ We have always been interested in that area.

Mr FORREST—Dr Peacock, you might be the right person to ask this question. I am surprised that in the evidence submitted to us we have not had a lot on insects. I know in Tasmania, with the timber industry, they have got fire ants. The big problem in my part of the world is fruit fly. Are you the right person to ask: are we not getting evidence on that because it is being addressed in some way? What is your view on that, particularly fruit fly?

Dr Peacock—It is still ad hoc. The fire ant situation relies on a lot of goodwill from governments. It was seen as a big enough issue that it was acted upon fairly quickly. We still think there is room for improvement in that area, in responding to those things. There is evidence about this from New Zealand, where they have more of a preventative approach to things like fire ants. They discovered a colony and wiped it out for about \$1 million. We are getting close to \$200 million, and we do not know whether we will control the Brisbane—

Mr FORREST—I am particularly interested in fruit fly. Do you have a comment on that?

Dr Peacock—I am not the person to ask about them. We did eradicate the papaya fruit fly when we put our minds to it, didn't we?

Mr ADAMS—The point is that it is better to tackle the fire ant, isn't it. If we can knock it over with \$300 million or \$400 million, it is better to do that while we have got a chance.

Dr Peacock—I have just come back from a meeting in Britain. I talked about TB and brucellosis eradication. If I am talking to wildlife specialists in Britain, New Zealand or the United States, the big issue is tuberculosis. I just shut up; I do not skite about it too much. That program cost the country \$3 billion, I think—

Mr ADAMS—In England?

Dr Peacock—No.

Mr ADAMS—Here.

Dr Peacock—Yes—but it costs those countries a hell of a lot now. It is an enormous cost to New Zealand. The Prime Minister's Science Council got a paper from a series of scientists about 18 months ago. It basically said that with environmental issues, prevention is always better than cure. It is best if you can keep it out, but if you do not keep it out then early intervention is best. A lot of the cost-benefit analyses just do not go out far enough. They stop after 10 years or something. But if you accept that then it is a problem forever, it is like the Western Australian issue. That is a \$4 million a year issue, but what if the cost of 1080 goes up and those sorts of things.

Mr ADAMS—What if we bring over Tasmanian devils, because they reckon Tasmanian devils are the reason why foxes never got a start in Tasmania. They say Tasmanian devils go down and kill and eat the young foxes. What if we put Tasmanian devils all over mainland Australia?

Mr TUCKEY—We have got enough Tasmanian devils here!

Dr Peacock—When you say 'they', do you mean Professor Tim Flannery and Senator Shayne Murphy? There are two people who believe that to be the case. I hope it is the case, to be honest.

CHAIR—There is no scientific proof they do.

Dr Peacock—There is no proof, and I do not think you would get the ethics approval to do the experiment.

CHAIR—I would like to wind up now by making an observation that you might like to comment on. I believe that the cane toad infestation is going to create massive problems in the destruction of our native fauna. Would you like to make a comment on that? Is any research being done in that area?

Dr Peacock—Yes. When we put in the bid for the new CRC we actually left cane toads out of it because of the issue of the lack of partners. The Queensland government has just injected \$1

million into cane toad research, so we have added it back into the CRC. I would hope that we would have some management responsibility for the long-term CSIRO work so that we could draw everyone together. We just sponsored the trap exercise in the Northern Territory. I think you are right in your comment that they have a major biodiversity impact, particularly as they move through an area. Again, it is one of those issues where one or two individuals have said, 'But the animals recover and we don't see those extinctions.'

The minister has just declared cane toads a threatening process under the EPBC Act. It took a long time for that to happen. There is a bit of a problem there. In an ecosystem model, it is hard to show the impact of some of the animals in a big environment. People say the animals learn. One cane toad is a lethal dose to a spotted quoll, so I do not know how a spotted quoll learns. Intuitively, I think that is an extinction. The Northern Territory government has taken steps to put them on the islands to try and preserve that species.

CHAIR—I agree. Dr Peacock, thank you. I reinforce what one of my parliamentary colleagues said about how informative this has been. It has been informative and very frank and I have certainly learnt a lot from the information that you have given the committee, following on from the questions of my committee. Thank you very much for your time.

Resolved (on motion by **Mr Adams**):

That this committee authorises publication, including publication on the parliamentary database, of the transcript of the evidence given before it at public hearing this day.

Committee adjourned at 6.37 p.m.