



COMMONWEALTH OF AUSTRALIA

Official Committee Hansard

**HOUSE OF
REPRESENTATIVES**

STANDING COMMITTEE ON AGRICULTURE, FISHERIES AND
FORESTRY

Reference: Impact on agriculture of pest animals

TUESDAY, 29 MARCH 2005

LONGFORD

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HOUSE OF REPRESENTATIVES
STANDING COMMITTEE ON AGRICULTURE, FISHERIES AND FORESTRY

Tuesday, 29 March 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 Lindsay, Mr Secker, Mr Tuckey, Mr Windsor

Terms of reference for the inquiry:

To inquire into and report on:

The impact on agriculture of pest animals, particularly:

1. To identify nationally significant pest animal issues and consider how existing Australian and State government processes can be better linked for more coordinated management of these issues across State boundaries.
2. To consider the approaches to pest animal issues across all relevant jurisdictions, including:
 - prevention of new pest animals becoming established;
 - detection and reporting systems for new and established pest animals;
 - eradication of infestations (particularly newly established species or 'sleeper' populations of species which are considered to be high risk) where feasible and appropriate; and
 - reduction of the impact of established pest animal populations.
3. Consider the adequacy of State Government expenditure on pest animal control in the context of other conservation and natural resource management priorities, with particular reference to National Parks.
4. Consider the scope for industry groups and R&D Corporations to improve their response to landholder concerns about pest animals.
5. Consider ways to promote community understanding of and involvement in pest animals and their management.

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Committee met at 1.30 p.m.

CHAIR—I declare open this public hearing of the House of Representatives Standing Committee on Agriculture, Fisheries and Forestry in its inquiry into the impact on agriculture of pest animals. Today's hearing is the third since the inquiry was re-referred to the committee after it lapsed when the federal election was called. It is the first hearing we have held away from Canberra since the election, and we will soon be visiting Western Australia for more hearings and inspections. We will be conducting further hearings in Canberra during the next session of sittings. We are therefore now getting further into our evidence-gathering phase and I expect that what we hear today will broaden the scope of the matters we are examining. I take this opportunity to introduce those of my parliamentary colleagues that are here at the moment. I will start on my right and get them to introduce themselves and give a brief overview of their electorates.

Mr MARTIN FERGUSON—I am the member for Batman and shadow minister for primary industries, resources and tourism.

Mr TUCKEY—I am the member for O'Connor, which is, in area terms, one of the larger agricultural electorates in Australia.

Mr SECKER—I am a South Australian and the member for Barker. It is not quite as big an electorate as Wilson's, but my electorate is about as big as Tasmania.

Mr MICHAEL FERGUSON—I am the member for Bass. It is just a little bit north of here and about 10 per cent of the size of Tasmania.

Mr LINDSAY—I am the federal member for paradise! I come from Townsville, North Queensland.

Mr ADAMS—I am the member for Lyons, the electorate we are in at present. It is 61 per cent of the land mass of Tasmania and I am very pleased to represent it.

Mr WINDSOR—I am sick; I do not normally sound like I do today! I am from the electorate of New England, in northern New South Wales. I am very pleased to be here again.

CHAIR—I am the federal member for Hume and chair of the agriculture, forestry and fisheries committee, ably assisted not only by my parliamentary colleagues but by the very capable deputy chair, Dick Adams. Our committee cannot function without the assistance of the secretariat. On my right is Ian Dundas, who is the committee secretary. I would also like to point out that Hansard is here in its usual professional manner, as is the support staff of the secretariat.

[1.33 p.m.]

BASHFORD, Mr Richard, Senior Silvicultural Technician, Forest Entomology, Forestry Tasmania

CHAIR—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 or would you care to make some introductory remarks or perhaps add anything to your submission, which was prepared some time ago?

Mr Bashford—I will make some introductory remarks. Forestry Tasmania has been developing a monitoring system for the detection of exotic insects of concern to forestry. We have had a long program of research since the year 2000, developing systems which would pick up low populations of insects in our forests. After a while we came to the realisation that by the time we pick up exotic incursions in our forestry estate they are usually well established—detection has been as a result of symptoms of damage.

We needed to look at a way of picking up exotic incursions at a very early stage, so we have been looking at port surround surveillance. The ports, through AQIS, have excellent detection systems, but once insects, diseases and fungal things fly over the fence, there is no protection or systems in Australia to pick up those early incursions. So we have been looking at ways of picking up these incursions in port surrounds and urban situations before they get to our forestry estates. This has really widened our research field out of the original forestry context. We have had a lot of support from federal departments, like the Department of Agriculture, Fisheries and Forestry, who have funded some of our work in port surround areas.

Through testing a large number of different trap types and getting advice from all round the world, we have now come up with a system which we can use that will detect early low populations of exotic insects which would attack trees in a general generic sense. We are looking at insects which would attack orchard tree species and urban street and park trees as well as native parks, native trees and Forestry trees. Many exotic incursions can change their host when they arrive in a new country, so an insect which overseas may attack one sort of tree species can often adapt when it comes into contact with different hosts and become a serious pest on a completely different host to ones in its original home state.

We now have this system which we can adapt, use and put in place. We have a demonstrations site at the port of Launceston, Bell Bay, which has been funded by DAFF, where we have all these systems running. We have incorporated the existing systems of Asian gypsy moth monitoring, which is a federal monitoring system, and fruit fly monitoring, which, again, is a national monitoring system into that. As an economy measure, we incorporate all these systems together. We save a lot of time and money with people, service, traps and diagnostics and things like that.

So we have a system which we are presenting and we are at a stage now where we need to have it taken over by state authorities to run it. We have federal funding from DAFF for three years to kick-start it at all ports in Tasmania. But it has now got to the stage where it has outgrown Forestry Tasmania, which does not want to run or fund a system such as this. It is now in the arena of the state governments and DAFF to put it into place operationally.

CHAIR—Do you believe that, given the points you have just made to the committee, the risk of insect infestation to the Tasmanian forest industry is greater today than it was, say, a decade ago? If so, could you briefly tell the committee in what respect it is greater and what is causing it to be greater.

Mr Bashford—The threat worldwide in all industrial countries has increased dramatically, mainly through the vast increase in trade, particularly with China and Asia. The number of interceptions at ports of forest insects which could be a danger to us is increasing by almost 10 per cent per annum. The monitoring of those species outside of the port areas has not changed in the last decade.

CHAIR—Your submission discusses sentinel planting plots as an alternative means of testing for exotic insect species. Has that method been trialled to date and what resources would be required to carry out a trial?

Mr Bashford—This is the first time that it has been operationally trialled anywhere in the world. It has been talked about a lot in the past. New Zealand put up a program to do it at Auckland airport, for example, but it was never done. We have put the trees in the ground, we have run it for one year and it is part of our system for very early detection of exotic insects and diseases.

Mr ADAMS—I think the cost in Tasmania was \$19,000 for the first year, running down to about \$11,000 after that. What would be the cost to do an Australia wide operation?

Mr Bashford—That is the cost per port. We were looking at approximately \$90,000 to run the system for the ports of Tasmania, which also included Hobart and Launceston airports. You multiply it by the number of ports.

Mr ADAMS—Would there be more opportunity for a pest to play havoc in a plantation than in a native forest?

Mr Bashford—I think there is more potential in native forests because of the diversity of true species in those, but from a forest industry's point of view, plantations are very high value.

Mr ADAMS—What would be needed to establish and get the resources and funding for the generic inclusion management plan?

Mr Bashford—That is one reason for setting up the demonstration site at the port of Launceston, where we integrated different government agencies to do it as an operational system. That is how the costing has been worked out.

Mr LINDSAY—Do you think your monitoring systems would have detected the Brisbane fire ant situation?

Mr Bashford—Not necessarily. We are basically looking at flying insects, so we might have caught some of the life stages of fire ant, but it would be unlikely that we would have detected fire ant. We possibly would have detected European house borer in Western Australia. That is a good example of something we might well have picked up at the port site. The European house borer was a very big problem in Western Australia.

Mr LINDSAY—In your formal evidence you said that from 2001 to 2003 Forestry Tasmania conducted port trapping trials. Was that in Hobart?

Mr Bashford—That was done in Burnie, Devonport, port of Launceston and Triabunna.

Mr LINDSAY—Was anything ever found in those trials?

Mr Bashford—Yes. We have two species of wood boring insects which are exotics and are new to Australia.

Mr LINDSAY—So your evidence would be that these monitoring systems are of value to Australia?

Mr Bashford—It certainly would.

Mr LINDSAY—This might be difficult for you, but one of the terms of reference was to consider the adequacy of state government expenditure on pest animal control in the context of other conservation and national resource management priorities. Can you offer a comment on that? Do you think that state government expenditure is appropriate in relation to the other priorities?

Mr Bashford—My comment would be that the introduction of a damaging exotic insect could cost millions of dollars to various different industries, not necessarily just forestry in Tasmania or anywhere else. The experience overseas has been that it costs many millions of dollars to attempt to eradicate or put into place long-term control of one damaging exotic insect. Although other things have preference, I think it has very high priority in terms of the potential cost.

Mr LINDSAY—If you were in a position to do so, would you have monitoring at every port in Tasmania and expect each state government in Australia to arrange that in their own states?

Mr Bashford—I do not see why it cannot be integrated or managed from a federal level, but each state would certainly have to have input into it in terms of cost.

Mr TUCKEY—Mr Bashford, I have a couple of questions with regard to what I might call the health and nature of the forest. I am reminded from reading that, when Abel Tasman first visited Tasmania in 1600 and something, he described a forest that had huge trees in it but widely spaced to the extent that he could see for miles between them. That is certainly not the case today. In other reading, it has been pointed out that in the American forest the conversion of

a forest of 30 trees to the acre to one of 200 trees was a major contributor to pest species inasmuch as the plants, because of the competition, were less healthy. Also considering, from an Australia-wide experience in pest species, including wild pigs et cetera, that we find that national parks seem to be the principal source, what are your concerns in Tasmania with the national park system? What is the capacity of your state government and your managers to deal with the pest species, be they insect or otherwise, in your national parks? Are they being overgrown and is wildfire the only way to fix the problem?

Mr Bashford—As far as national parks go, the only way an exotic, damaging insect would be picked up would be by observation of severe damage. There are no formal surveys or forest health surveys conducted in national parks, as there are in commercial forest areas where we have annual forest health surveys. So the chances of currently picking up something in a national park area would be very low, until it reached a stage where it was obvious that damage was being caused.

Mr TUCKEY—It would be like the 19 million pigs in the Cape York Peninsula, right alongside the foot-and-mouth province of Papua New Guinea.

Mr Bashford—You would not pick it up until there was plenty of evidence that something bad was going on.

Mr TUCKEY—I have another question regarding that. I used the words ‘point of entry’. Whilst you talked about having traps at all points of entry, which seems to be a good start to the system, is there any benefit in also having some of your tree species in close proximity to our points of entry so they act as the first taste? But I guess that could then go to warehouses and other places. To what extent do our fumigation and other work practices assist us? What is the responsibility of the exporter—the people who send stuff to us—in terms of packaging some crockery or something which still has wood shavings et cetera around it?

Mr Bashford—Both here in Australia and in the United States, Canada and Europe—all around the world—wood packaging is a real threat, as far as the transport of timber insects goes. Although we can get certification from many Asian countries sending those goods that their packaging is free of insect pests that may not necessarily be the case. I think AQIS frequently find packaging which is infested with timber insects and a range of other pests and diseases. I think it is a real problem.

Mr TUCKEY—Do you have any recommendation for us in terms of compulsory fumigation, or anything of that nature, when these goods arrive in Australia, irrespective of how they are certified by the exporting country?

Mr Bashford—The main problem with the inspection of containers is that there are so many containers coming into Australia. Something like five to 10 per cent are actually inspected. The cost of fumigation is very high. You have to have special containers that you can fumigate. Because of the cost of sending goods, it has to be a pretty good case to warrant full inspection, fumigation—all those other things. The better way to do it is have the goods certified before they leave the country of origin, and that is the approach being taken at the moment. But the countries of origin do not necessarily have the same standards of packing materials as other countries.

CHAIR—On that point, in relation to the significant number of containers coming into the country which are a nightmare to inspect and fumigate, do you think there is some scope for a requirement for each of those containers to have an injection point so that, depending on the content of the container, you could inject fumigant into them?

Mr Bashford—I do not think that is a practical option. It costs roughly \$30 to fumigate a container. There is also the time it takes to fumigate the containers. The turnaround time for containers in Australia just does not allow for that sort of operation to take place on all containers. It is done for some when something is found—yes, they are fumigated—but that is a really small proportion. So you have a huge number of containers coming in and very few are inspected. They inspect as many as is practical, but that is where the real danger exists, because those containers then move out of the port, often unopened in port areas, and go to devanning areas, which can be inland. As soon as the doors of those containers are opened—in my case, I am looking at forest insects—things fly out of them. That is where the problems start and that is how we get introductions establishing.

CHAIR—Given that answer, how important is it for the public awareness program to be introduced at government level? And given that that may be a critical measure that you believe would help in controlling any species that got through the system, how could that program be improved to make it effective? In other words, if we are describing a situation where the community is to be made aware of the possible spread of an introduced insect pest in an environment where the National Parks and Wildlife Service does not have any input, how critical is it for the community to be involved in the process as well?

Mr Bashford—The New Zealand experience is that about 80 per cent of incursions are picked up by members of the public seeing damage—whether it is done by ants, insects or furry animals does not matter—because there are not any other systems in place at the moment. So public awareness when seeing different things is really important and it is fairly easy to do once you know what the insect or pest is that has arrived in the country and literature has been put out about that. But we are talking about a huge range of insect pest diseases and other pests. You would have to have hundreds and hundreds of leaflets describing them all, and the public just could not absorb that sort of thing.

CHAIR—Who should pay for that?

Mr Bashford—Currently a lot of that work is done by AQIS, who provide that sort of information. Programs for awareness of a few of the major pests are already done, but often they are piles of leaflets perhaps sitting on a museum counter or in a council office.

CHAIR—What about a contribution by the industry to an advertising campaign, given that the industry could potentially suffer significant dollar losses through the introduction of pests?

Mr Bashford—I think it is really hard to put the onus on the public to act, as I observe in these sorts of things. The average person who sees something eating their garden tree is not going to necessarily take that specimen to the museum, have it formally identified and all that sort of thing. There is really a great chance—

CHAIR—What should industry be required to do? Should they be made to levy themselves for a package of money to be used to educate the community about the seriousness of the problem?

Mr Bashford—I think that is an AQIS job and it is a job that AQIS already does. It provides information to both the public and people who are working in the field. That is already being done and I do not think it necessarily needs expansion until you have a pest problem.

Mr MARTIN FERGUSON—Is the question of a more rigorous AQIS certification program by country being rigorously pursued and, if so, why has it broken down? Would that not also lead to us identifying the countries which we should question the certification processes of, which could then lead to more rigorous spot checking of the containers from those countries? That would go a long way to solving your problem.

Mr Bashford—That is not really my field of expertise. However, the main problem that exists in all Western countries is the importation of goods, mainly from Asia, and the packing materials that are used—

Mr MARTIN FERGUSON—Which particular countries have that potential danger?

Mr Bashford—The United States has had several serious introductions through packaging material from China. We would expect the same sort of thing—not necessarily just from China; that is just an example. Certainly, the larger economies in Asia are trading with us a lot more and AQIS needs to find ways to have a more rigorous approach to certification of those containers before they leave those countries of origin.

Mr MARTIN FERGUSON—Following on from that: what process of consultation currently exists between Forestry Tasmania and AQIS concerning these issues?

Mr Bashford—None whatsoever. Forestry Tasmania has no contact with AQIS in formal terms in any way. But I certainly have a lot of contact with AQIS through my specific projects.

Mr SECKER—Just following on from the questions about fumigation, while I am not saying that the sentinel plots or whatever would not be useful to find if they have got through the quarantine system, I would have thought in the quarantine setup that you would find the source of danger—which may be China or it may be another country—and you would look at the insects and say, ‘How do we get rid of them?’ It could, for example, be by heat—phylloxera is killed by 45 degree centigrade heat—or smoke or insecticide. You would use the cure and then, if it is going to cost only \$30 per container in a container that is worth \$10,000 plus, I would have thought that that was pretty cheap insurance and that everything should be fumigated before it came into Australia. What is the problem?

Mr Bashford—It certainly will not be fumigated before it comes into Australia.

Mr SECKER—Why not?

Mr Bashford—Because usually those countries do not have the facilities to do that. For example, in China there are large numbers of fumigation companies which Australian agents

employ to fumigate their goods before they are packaged and sent over. Often they are not of a standard which we would accept in Australia. So the goods may not be fumigated as well as they should be. They may not necessarily have been done at the time that they should. There are all sorts of problems with the stuff coming into Australia.

Mr SECKER—In your opinion, if that is the problem, why don't we as a country insist on a fumigation process before they actually come into the ports of Australia?

Mr Bashford—That is one of the problems, but we are talking about several million containers a year. We are talking about the turnaround in container loads, where they are going, their origins—

Mr SECKER—But if it is done on the day before it comes into port, it will not affect the container movement in the port. If you are not happy with the certification from China or some other country, why don't we insist on it being done properly before it actually comes into port?

Mr Bashford—If you are suggesting that it is done on the ships and if you have seen container ships—

Mr SECKER—They are big.

Mr Bashford—They are pretty well loaded. There is a lot of equipment needed to fumigate. You have to have the cylinders and there are the safety issues. It is a good idea—that is the ideal way to solve the problem—but I think there are a huge number of physical problems that would prevent it actually being done in terms of both manpower and the number of fumigation units you would need. We are talking about millions of containers. A lot of the containers are getting old. They leak and they do not fumigate properly. Ideally, yes, it is a solution to that particular problem of packaging and storage in containers, but at the moment it does not seem to be a viable option to do all of them.

Mr SECKER—It is a concern for the forest industry if we cannot control it, isn't it? In the food and animal industry, you would not put up with that sort of possible failure rate.

Mr Bashford—There are lots of other pathways for things to come into Australia: tourists bringing their personal luggage in, packaging and the holds of ships. Viable stages of pest species on the outside of ships and aircraft is also another major cause of incursions, but there are quite a number of others.

CHAIR—I just make the observation that we seem to have pretty stringent import risk-analysis guidelines on other matters, but I am astounded that we do not have that on timber.

Mr TUCKEY—This might be a message for us to ask AQIS to come along to the committee and tell us a bit about their processes in that regard. Genetic modification is a response to some of these pest species. Are you aware of any research involving the production of plantation trees in particular that would be resistant to these animals?

Mr Bashford—We certainly look at resistance. Usually things like growth rates and timber quality have priority over an insect-resistance capability. For example, in Tasmania we have

planted mainly *Eucalyptus nitens*, shining gum, which is a tree from Victoria, not a Tasmanian native. One of the reasons it was planted in such huge numbers in Tasmania was that it has very few insect pest problems in Victoria. As soon as it came to Tasmania, it was hammered by quite a range of native insect pests.

Mr TUCKEY—Are you aware of any research programs, as has been done with cotton and other things, that have come up with a genetically modified tree that in the future would be resistant—in other words, an insect that poisons them? Something that was mentioned today and is very prevalent in Western Australia is dieback. I presume it is the same fungus. I wonder how we are dealing with that from that perspective?

Mr Bashford—We can look at provenances of trees within a species of commercial trees to find some that are less palatable than others. Often if you pick out a provenant which is less palatable to a particular insect pest problem, it is very palatable to some other pest which moves in and promptly negates the advantage you have had. Not all insects have the same behaviour and the same feeding. The issue is being looked at and there are ways of doing it.

CHAIR—Thank you very much, Mr Bashford. We appreciate you giving your valuable time to give evidence to the committee, and we thank you for your input.

[2.05 p.m.]

GREGG, Mr Rupert, President, Tasmanian Farmers and Graziers Association

WHYTE, Mr Ian, Executive Officer, Natural Resource Management, Tasmanian Farmers and Graziers Association

CHAIR—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 or would you care to make some introductory remarks, or perhaps add anything to your submission which was prepared some time ago?

Mr Gregg—Yes, we would. I refer you to our submission, which concentrated on the issue of the availability of 1080 poison to us. In that submission we have given some actual trial data and some information to give you a real understanding of the impact of wallabies, in particular, on our farming and forestry environment and some indications of the difficulties we have in managing heavy wallaby populations—and possum populations, for that matter—just by fencing and shooting. Fencing and shooting are both used extensively—particularly shooting. There are times and places where the population build-up is such that those measures are inadequate or beyond any economic threshold of effectiveness.

We can go through that submission in more detail if you like. We would like to amplify some of the things it touched on. The issue of wildlife population management needs to be refocused away from the prism of 1080 or shooters or whatever. Wildlife populations are universal and widely dispersed in Tasmania. They are a community problem, and we need a community focus on how those populations are managed, in the same way as we manage our livestock populations, the trout population, and so on. It is no longer satisfactory to regard the wallaby population problem as being a problem just for farmers. It is a problem for all of us. We can give you any number of examples where, as rural towns and even cities expand into semi-rural areas, suburban or outer suburban smallholders and even gardens are constantly having incursions from possums and wallabies. It is not just a farmer problem; it is a community problem, and we need to refocus the way we address that.

CHAIR—Mr Whyte, do you want to make a statement?

Mr Whyte—No, apart from re-emphasising Mr Gregg's comment that in our view the problem must be seen and owned by the community and the government as a community and government problem. The issue needs to be one of animal population management rather than browsing damage control. A range of other policies can be impacted adversely by the lack of animal population management. I raise the example of vegetation protection policies, both federal and state government policies. To the extent that you have limited vegetation and you have excessive animal numbers, you can wreck the values within the vegetation that you are seeking to protect. To the extent that you have conflict between two policies in that way, it re-

emphasises the position that we are taking: we need to have a policy for animal population management rather than simply a string of policies which address individual impacts.

Mr WINDSOR—The submission is pretty well based on the use of 1080. You have various case studies on what would happen if 1080 were removed, together with the expensive fencing, various alternatives et cetera. What pressures are there in Tasmania to stop the use of 1080? This committee has partly looked at 1080 as a control measure in other parts of Australia. There is currently some information coming through in my electorate where 1080 was used for the control of wild dogs. In national parks, for instance, it was not allowed to be used because of the impact on some other species. There is some information coming through now that the supposed impact on other species was not quite as expected, particularly in relation to the native quoll. Are there any examples in Tasmania where it was suggested that 1080 may have an impact on other animal species but there is proof that it has not?

Mr Gregg—There is certainly the perception in the public mind that 1080 will cause pet dogs and whatever to be impacted when they eat the carcasses, and that indeed has happened. It is notable that, given the amount of 1080 that is used over fairly extensive areas, that is very infrequent, and that in part that is mediated by the control measures that are invoked when 1080 is used; that is, we are required to make efforts to pick up the carcasses and so on so that we minimise that risk, and the uneaten baits are to be cleaned up. The targeting of certain species is very effective. The baits that are used are eaten by wallabies and almost nothing else. The impact on non-target species is absolutely minimal. I should add that one of the real risks that we see is that if 1080 use is banned some people may in desperation resort to illegal measures and thereby create a real risk to non-target species.

Mr WINDSOR—You did not answer the question about what pressures there are to remove 1080. There is a figure that surprised me. Is it correct that there are only 10 kilograms of 1080 used in Tasmania annually?

Mr Gregg—That is correct, yes, and about half of that is used in forestry and about half on private land.

Mr MARTIN FERGUSON—Australia wide it is 150 kilograms and in New Zealand it is 2,000 kilograms. The amount is insignificant compared with the amount in New Zealand.

Mr Gregg—Yes. It is readily available in New Zealand. It is used very extensively on their possum population as well as others.

Mr MICHAEL FERGUSON—How recent is that figure of 10 kilos? I had heard it was even lower.

Mr Whyte—The usage in kilograms of powder, which is what that refers to, is declining as we speak. There are spikes in the wake of particular events. A bushfire on Flinders Island two or three years ago caused wild animals to come out of the burnt areas onto pasture, creating the problem. That caused a spike. Those figures date from about a financial year ago. The figures for the financial year 2003-04 were about 7½ to eight kilograms.

CHAIR—Can you give an observation to the committee about why, given the low usage of 1080 compared with the rest of Australia and New Zealand in particular, there is such a dramatic push from elements within the community to have it banned.

Mr Gregg—We have touched on that in the submission. Part of this is purely because it was caught up with the general forestry bashing issue, to be frank about it. There are people who do not like production forestry at all. This is a stick to beat them over the head with. To be quite honest, we are caught up in the backwash of that.

Mr WINDSOR—There has been no concerted campaign against the farming community over the use of 1080; it is mainly a—

Mr Gregg—The public campaign seems to be almost entirely targeted against forestry, particularly private forest companies.

Mr TUCKEY—They are doing the same with aerial spraying. Aerial spraying has been around Australia forever.

Mr Gregg—It is exactly the same.

Mr TUCKEY—All of a sudden they start spraying plantations and it is a monster. This goes on.

Mr Whyte—Going back to an earlier question of Mr Windsor: primary industry—that is, both forestry and farming—are under pressure over 1080 use primarily from within the state sphere of government but also from the federal. Most recently, the new coalition government's campaign policy in relation to forestry in Tasmania contained reference to 1080. It remains to be seen how that is clarified, shall we say. The APVMA, which is a national entity managed from Canberra and the body that puts the usage stickers on various chemicals, is towards the end of a review of what is on the sticker for 1080. My understanding is that the length of that review has reflected the fact that they wanted to be reassured in respect of Tasmania that non-target animals, particularly native animals, were not being significantly affected by it. They are yet to release their reports. We will see what comes out.

Within the area of the states, it is primarily being driven by the forestry issue. I come from a forestry background, and in my view there is no doubt at all that, if 1080 were banned in point of forestry, in tomorrow's papers we would see a push in point of farming. There is no reason to expect otherwise. Why it happens in more detail reflects a number of things. Firstly, there is an increasing number of people moving into traditional farming areas for lifestyle reasons who do not understand the imperatives on commercial farming. If you look at the four case studies that we put in our submission last year, you will see that all of them have addressed the issue of dogs. No dogs have been affected in any of them—and dogs are highly sensitive, as you know, to 1080. They have not been killed, because the farmers and the farmers' neighbours in those areas manage them, and other stock as well, for that matter.

As you get lifestylers moving into farming areas who (a) do not understand the importance and (b) feel that their rights are being constrained by having to keep their dogs under control when they are told that the poison is about to be used, you find that in those circumstances they

feel affronted that they have to leash, muzzle or kennel their dogs. So not for a moment will the issue go away. The issue is being driven as much by social trends, in that sense, which are not going to go away either.

CHAIR—So you are saying that the issue is being driven by the philosophical view of an individual minority group moving into rural areas for a country lifestyle rather than some legitimate reason based on science.

Mr Whyte—I would express it slightly differently. Certainly there is no scientific reason demonstrated at all. The opposition, though, comes from two broad sectors. That is one, in particular, with regard to farming. The other is simply the organised opposition (a) to forestry and (b) to the use of various chemical and farming practices in this state. Chemicals, as Mr Tuckey mentioned, are another one.

Mr MICHAEL FERGUSON—Mr Whyte, it would probably be fair to say that the TFGA does not oppose research into alternatives to 1080. Would that be right?

Mr Whyte—We encourage it. We have been involved with it for 25 years.

Mr MICHAEL FERGUSON—I will preface my question by saying that the reason I thought that the use of 1080 in Tasmania was less than 10 kilograms was that I recall Tasmania's environment minister, Judy Jackson, making a public statement in about the middle of last year to the effect that it was so good that we had reduced our 1080 usage in Tasmania by such a large proportion that it was at something of a record low in modern years. Do you think that governments in general, and specifically the Tasmanian government, have given up on 1080 and have made a presumption that one day there will be an alternative that has all of the benefits that you have listed?

Mr Whyte—I have two comments on that. Tasmania went through a process called Tasmania Together, which extended over two or three years, about four or five years ago. One of the outcomes of that process, which essentially sought to articulate a range of goals in respect of a whole range of issues, was the use of 1080 specifically. That policy—which had no particular technical merit; it was simply a wish—sees the phasing out of 1080 to zero level in 2015. That is point one. The second point is that I think that the government in Tasmania is being driven largely by what it sees as major community perceptions on the issue. That is for it to decide. It is certainly not based on science as such. I think that perhaps some of the parliamentarians on both sides in this state—and, for that matter, in the upper house—hope that there will be a silver bullet somewhere that will come out of research. Many of them, though, have been involved long enough to know that that is not going to happen. The outcome is going to be a suite of measures applied in a customised mix, property by property, and 1080 is a last resort. It needs to be there. Not all properties use it. Where it is necessary it is because other options have not worked.

Mr Gregg—You will see reference to some of the methods that have been trialled over the years, such as repellents et cetera. As Ian says, there is nothing new about this and we are aware of no new approach to the problem at all. We can go back and do the research again on repellents and come up with yet another way of trying to fence them and all that stuff, but we see no practical alternative.

Mr TUCKEY—It is amazing how people talk about some new researched alternative but, death being so permanent, how on a scale of one to 10 do we put a particular means of extermination? There is the bullet—and that requires a high degree of accuracy or there is considerable pain—there is strychnine and there are all the others that we used to use. When one picks up the newspapers these days one finds that somehow or other the most painful way to kill an animal is by using 1080. That is not my understanding. Particularly for the record—from your own experience and that of your members—would you like to make some comment on that? It is all right to say that you will have a repellent. As forestry minister I had people telling me down here years ago that a fully planted area of seedlings, which are not inexpensive, would disappear overnight with these pest intrusions. So obviously there has to be a response. It might be that without some extermination they would all starve to death. More importantly, to clarify this matter, where does 1080 stand? I understand its effect is pretty quick. I am not sure what some of the descriptions of animals foaming at the mouth and so on indicate. What do you have to say about that?

Mr Gregg—As to the stories of animals foaming at the mouth and so on, there is no getting around it; it is not a pretty picture. That seems to be occurring where the concentration of the 1080 used in the baits has been reduced. That is part of the reason why the total use has declined. Obviously that will increase the risk of underdosing, as it were. Animals would normally die, as you say, very quickly and, as far as can be discerned, painlessly. But this can result in animals taking longer to die and exhibiting those unpleasant symptoms. Obviously nobody has ever come back from a major dose of 1080; it is as lethal to humans as anything else. In cases where mild doses, underdoses, as it were, of 1080 have been ingested by humans, the evidence is that they exhibit horrible-looking symptoms but are in fact oblivious to it. That is the only evidence we have as to what level of pain is suffered by animals that are poisoned by it.

Mr Whyte—My understanding is the same. There have been the odd occasions when people have ingested it. There was one in New Zealand, as I understand it, some 15 or 20 years ago. The symptoms—and that person's recall of them—was as Mr Gregg said: convulsion but involuntary and not necessarily painful. Having said that, pain is a relative thing and what causes distress is the perception, the manner, of death. I might add that I think your point is well made, Mr Tuckey, that death is death. Depending on how it is done, it may be a little bit more certain or a little less certain. About a year ago when the issue of 1080 was raised again in Tasmania the leader of the parliamentary Greens in Tasmania said: 'Don't use 1080. Let's get back to good old-fashioned shooting.' Death is death. It is my understanding that the New Zealanders have had these debates periodically. While possums are the main target of their use, deer have also been targeted with 1080. People raised the issue of a painful death, so they forswore their use of 1080 and went back to shooting. They have reverted to 1080 because of the number of wounded animals taking a week or more to die as a result of misplaced shots. It becomes an issue of last resort where repellents are not appropriate for one reason or another. The issue of forcing opponents to choose between one manner of death and another really needs to be put on the agenda.

Mr Gregg—We are talking about forest seedlings with repellents. The problem with tree seedlings is that the repellent that is sprayed on today will be diluted, firstly, by rainfall and, secondly, as the plants grow. They become ineffective very quickly. The idea of putting repellents on pasture is self-evidently nonsense.

Mr TUCKEY—To say nothing of the fact that your sheep and cattle might not like eating it either.

Mr Gregg—Exactly.

Mr ADAMS—On this issue of land management and managing animals, in Tasmania, our endangered species are managed quite efficiently. We have processes for that. The animals we are talking about are basically pademelon, possums and wallabies, I think. There are some deer issues, but, with those three species, none of them are endangered. Their populations are growing, and that is why they are becoming more of an issue. There is a need to knock enough down to let the economics work for forestry and farming. Is this a matter of perception within the public debate driving this on, in your opinion, or are we destroying species in the state.

Mr Gregg—You are absolutely right. Wildlife populations managed in Tasmania—indeed not just in Tasmania—may be rare or endangered. At one end of the spectrum are the orange-bellied parrots and at the other end of the spectrum are the nasty, intrusive feral pests like goats, foxes and cats. Each of those is much less of a problem than the very large numbers of native animals which have very healthy populations indeed living in an environment that we have essentially created for them: we have this enormous restaurant with a lovely dormitory right beside it.

Mr ADAMS—There seems to be a perception that these animals are not endangered. There are plenty of them proliferating our land mass, but somehow they are impacting on us economically. All of a sudden it is an issue that we have to deal with because the public debate has moved to a level where people want to deal with it.

Mr Gregg—There is certainly an issue with killing native animals. I do not know how we get around it. An animal is an animal. You can argue that no animal should be killed—that is a respectable philosophy to hold, but to differentiate between a native animal and another one is—

Mr ADAMS—What I am trying to get on the record is that if we lock up a piece of forest that we used to call a forest and now call a national park and do not manage that we are likely to end up with more problems than we had. Is that your perception in relation to wildlife? If we continue to let the wildlife take over, knock off 1080 poisoning and do not do anything about culling them, what would be the result?

Mr Whyte—That is quite right. The fact is that Tasmania, like most of Australia, is a mixture of primary industry and lifestyle—a mixture of post-1788 and pre-1788. What we have is vegetation which is being conserved. We have an interest in conserving native animals, but the best way of managing that conservation is to understand that resources are now restricted—and that includes habitat room as well as farmland and forestry.

The way to manage to the best interests of both animals and people is to deliberately set targets and manage for that. I might just give an example there. It is quite unrelated to primary industry. In Tasmania we have an island, Maria Island, which has a population of wallabies. There are no natural predators and there is a good deal of tucker. Each year, as I understand it, and certainly periodically, there is a culling program. It does not hit the airwaves, but it is a quite deliberate management of population. I do not know that detail of it—I would be surprised if it did not seek to model both sex ratios and age profiles. It is done by shooting. It does not hit the

airwaves, I suggest, because primary industry is not in there. It is effectively managing impact on habitat. There is no difference between managing the impact of wallabies on Maria Island in what is a native vegetation situation and management in a mixture of primary industry and native vegetation, which is the typical construct in Tasmania.

CHAIR—I will just make an observation before I give Michael and Peter the opportunity ask some questions. You may be interested to know that there are arguments on the opposite end of the scale to the one that is being put here in Tasmania, whereby we have heard from a particular group that we should allow natural evolution to occur even at the expense of wiping out an endangered native species.

Mr MICHAEL FERGUSON—Normally, you would refer to government regulation that impinges on people's livelihoods as red tape. I have coined the term 'green tape' for the government regulation on farmers with regard to the environment. Do you think that this green tape and the restriction on farmers' use of 1080 has actually had an impact on the farmers' ability to control pest species?

Mr Gregg—Yes, it has. We have outlined in our submission the process that has to be worked through to get approval to use 1080. That in itself is an arduous protocol. That protocol is currently being rewritten. We have not even seen a final draft or whatever. No doubt it will be made even tougher.

Mr MICHAEL FERGUSON—Is that having an impact at that other end, on the pest populations?

Mr Gregg—Certainly, because there are plenty of people who have used 1080 and, for instance, have not had a terribly good result—rainfall or whatever. The answer is, 'Don't come back for two years.' That means you have got two years of population growth starting off from an already high level. That can have a serious impact.

Mr Whyte—A particular example within the state is King Island, in that regard. Basically, the animal in question there is the wallaby, and that exists in epidemic numbers at the moment—some hundreds of thousands. Shooting is going on, but it is plainly not working there. We do have a particular impact there on farming because of numbers and not being able to achieve the control that is necessary within the protocols that we have at the moment.

Mr LINDSAY—The TFGA believes that 1080 must remain available. In Tasmania, which other organisations do you believe have the same view?

Mr Whyte—The two primary industries, if you like—and this is the way that Tasmanians tend to categorise industries—are forestry and farming. In Tasmania, by comparison with every other state, there is quite an overlap in those two. Half the wood which is harvested in Tasmania comes from private property. The bulk of that half comes from farms, essentially all of which also grow pasture and crops. So there is much more of a continuous spectrum from one end of trees to the other end of pasture in the state.

Mr LINDSAY—Do you communicate with organisations on the mainland who have a similar view?

Mr Whyte—We generally stay in touch with them. Primary industries in Tasmania tend to work quite strongly together to share information, extending from the appropriate government departments through forestry associations into farming. They are focused through a group called the Browsing Damage Management Group.

Mr LINDSAY—What is your evidence in relation to the world view on this particular chemical?

Mr Whyte—I am not exactly sure that there is a world view. The issue of 1080 use as distinct from animal management tends to be focused in the Western countries it is used in. I do not know the full spectrum of countries, but it is used in the United States, it is manufactured in New Zealand and Australia, and I imagine it is used in Canada as well.

Mr LINDSAY—You said in your evidence:

The primary impact of browsing is through the loss of biomass. However, a second and serious impact is through the soiling of crops ...

I found that interesting. Could you explain what the impact of that is and how that affects Tasmanian industry?

Mr Whyte—In my understanding it is not as important as the loss of biomass but it is very important for the individual enterprises where it happens. You will see in one of the case studies we presented, which is in pasture country, dairy country, that faecal matter from animals can taint milk. That is a material impact. Rupert may have more idea of the detail beyond that.

Mr Gregg—It is the same issue as you would have in any heavily grazed pasture—you get a lot of faecal matter left behind and that reduces feed intake. Particularly in the case of the dairy, that shows up that day in production. So it can be quite a serious impact, or more easily measured, let us say.

Mr LINDSAY—The last conclusion in your submission was:

Government must maintain access to 1080 ... in the absence of an efficient and cost effective alternative.

Why didn't you go in the other direction and ask us to make a recommendation, for example, that we should be looking to R&D to find a science solution to this? Do you believe there will not be a science solution?

Mr Gregg—In a nutshell, that is what we believe—that we will go around the same tracks that have been gone around for the last 20 years trying to find real alternatives and come up with the same answer, after having spent another bucket of money.

Mr LINDSAY—So you would not want us to make a recommendation that there should be a science solution to this?

Mr Gregg—If we can find a novel approach—for instance, if there is a way of reducing the fertility of the animals with an insect vector or something that can be administered through a bait

or whatever—some genuinely new approach, we would be more than happy to support it. To just spend a whole lot more money trying to find a new way of putting up a fence or a new kind of repellent—

Mr LINDSAY—But isn't that how science works? You do not know what the outcomes are going to be when you start—you have to spend a lot of money and you might not get an answer.

Mr Gregg—It is a value judgment as to whether or not anyone is going to come up with yet another new kind of fence that is more effective than the 20 that have been tried before.

Mr LINDSAY—Is the industry you represent prepared to put money into R&D?

Mr Gregg—We do.

Mr LINDSAY—Through a CRC?

Mr Whyte—No. The way the research has happened over the last 20-odd years has varied. Some of it has been through CRCs—and that has been forestry focused—and the outcomes of that come back onto farms as well. The research they have been doing has tended to be in the areas of the breeding of seedlings—in other words, palatability; repellents, as distinct from breeding; and, increasingly, risk assessment and risk management of browsing animal behaviour—for example, how far in from the edge of the bush they come. So the basic science has been done there.

A lot of work has been done with the Tasmanian government's department of primary industry over 20 or 25 years, looking more specifically at pasture related issues—again, the risk management of animal behaviour and that sort of stuff—and also at the different types of fencing. Within the industry, the contribution has tended to be mostly in-kind—the costs absorbed in putting in fencing types, for example. So it has been a shared load.

Coming back to our last paragraph, we do not seek to exclude R&D. In fact, we are saying that, to the extent that that does not fill the gap, there needs to be access for that last 10 per cent. One of the most productive developments in very recent times, for example, is the possibility of harvesting and marketing skins and meat. That approach will be simply one more arrow in the quiver but, within particular circumstances, it may reduce the significance of the problem. It is a case of risk management—damage management.

At the moment, harvesting and marketing plans are in draft for both Flinders Island and King Island. The basic impediment to those plans going through is the difference of view between the state and federal governments over the protocols for firearms to be used. The Commonwealth government has a protocol which specifies higher powered weapons, and the state has just as explicit a protocol specifying lower powered weapons. The lower powered weapons are quite appropriate for our smaller animals and more complicated terrain than you typically have in New South Wales. To the extent that that sort of customisation can be accommodated, it is another tool in the tool box. To the extent that that can generate and support an industry, I do not think it will cure the problem for Tasmania but it may reduce it in particular areas.

Mr SECKER—Following on from what Michael Ferguson has said, you seem to be a bit reactive to 1080. You are saying, ‘Please don’t make it any harder for us,’ rather than being a bit more proactive and saying, ‘Please make it easier for us.’ That is not a criticism of you; it is understandable because you are under threat of losing the opportunity of 1080. But have you, for example, looked at what other states do with 1080? I am not sure exactly what South Australia now does, but they used to encourage it at certain times of the year for foxes. It was done through local pest animal and plant boards with very little bureaucracy. They would encourage it at lambing time in April and May and again at fox mating time in September and October. You just had to go to the local council depot and they would inject the meat on the spot. They would even provide the cubes if you paid a little extra. You just had to sign the bit of paper and the job was done. It was a lot easier and a lot less bureaucratic. The government and local pest and plant boards were positive about the effects of that on the fox population. Have you looked at that as a basis for what you could do here?

Mr Whyte—That is precisely what we would like. You are characterising a community or a government owned issue. Going beyond what you are talking about in Queensland, my understanding is that they aerially drop the stuff. It is not quite as sophisticated as here. But what you are talking about reflects as much as anything the politics of native animal control as distinct from feral control. That is basically our problem.

Mr Gregg—It is notable that the fox task force has used I don’t know how many tens of thousands of baits. They have very successfully poisoned a lot of feral cats. We have yet to find a fox carcass that has been poisoned. There is absolutely no community issue whatever with using 1080 poison on the foxes.

Mr Whyte—Or, for that matter, on rabbits. It is a regulatory requirement to use it on rabbits.

Mr Gregg—To follow your previous point, yes, earlier in my lifetime, let alone before that, it was not just encouraged; it was virtually mandated—‘We are going to poison’—to reduce the rabbit population.

CHAIR—In the area that I represent, foxes are in greater numbers today than they were five years ago.

Mr MARTIN FERGUSON—The real problem with 1080 is the potential elimination of its use in state forests, which makes state forests, again, a bad neighbour, and then the push from state forests into agricultural land. The second issue I raise is that we saw a successful shooting program today at Connorville Station which we heard about in the endeavours on King Island. Your submission says that shooting has become somewhat more problematic since the introduction of the tighter gun laws. Can you also elaborate on what the problem is there?

Mr Gregg—One of the problems is if you do not live on a farm, then showing cause why you should have firearms licence is a barrier that has to be jumped. We have not exactly lost a generation of shooters, but we are finding less and less people who are not actually living on farms applying for firearms licences—going through the registration procedures and so on. Given the statutory requirements for firearm storage and so on as well as the actual licensing requirements, it is understandable. But it is certainly starting to have an impact on the number of

people who are available to shoot. In fact, one of my colleagues recently commented that when he had his shooting team lined up, the youngest one was 50 years old.

Mr TUCKEY—Do you mean they were all farmers?

Mr Gregg—Yes. Obviously the clock will tick on that. We need to take some steps to try to mitigate that.

Mr MARTIN FERGUSON—It is almost as if we might have lost that fight on 1080. You want a recommendation that it not be extended beyond state forests, if that is where the line is drawn at the moment.

Mr Whyte—That is correct. The state, which owns state forests, has made an owner's decision, if you like—

Mr MARTIN FERGUSON—By 2015?

Mr Whyte—No—by the end of this calendar year.

Mr TUCKEY—In Tasmania.

Mr Whyte—In Tasmania. The Premier, in his 'State of the State' address, in July or so last year, said that Forestry Tasmania, in its operations, would no longer use 1080 after the end of this calendar year.

Mr MARTIN FERGUSON—What additional resources have been thrown in to overcome the problem created by the withdrawal of 1080?

Mr Whyte—I need to specify that withdrawal explicitly does not extend to private property ownership.

Mr MARTIN FERGUSON—I accept that.

Mr Whyte—Just to quantify that: of the 50 per cent of 1080 usage which is, more or less, for seedlings, about half—25 percentage points—is in state forests. So the unilateral withdrawal of state forests will reduce total usage notionally by about 25 per cent. What we will then have is private usage, on private forests and private farms. The implication of your earlier point is that as soon as that happens anyone next door to state forests and particularly to logged and regenerated coops, which provide the best tucker, will have an increased problem. It is aggravated by the fact that in Tasmania the obligation to go equal shares in fencing does not apply to forestry agencies. It is aggravated further by the increasing irrigation and fertilisation by farmers in particular—in other words, for crops rather than seedlings—because of their need to increase land productivity in order to be competitive. What we are doing is loading up the plates in the kitchen even higher and removing the door between the bedroom and the kitchen.

CHAIR—On that note, it is appropriate to say that these short-term reactions without long-term planning create more problems than were originally the case under the old regime. Thank you very much for your evidence. We very much appreciate your frankness, and we hope that we

have picked up enough today to ensure that some sensible recommendations come from this committee. I have no doubt that they will.

Mr Gregg—We commend you in that regard.

[2.57 p.m.]

WARDLAW, Dr Timothy James, Principal Scientist, Biology and Conservation, Forestry Tasmania

CHAIR—We have received a handout from you which the committee has determined to take as an exhibit. Although the committee does not require you to give evidence under oath, I 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 contempt of parliament. Do you wish to make a brief statement in relation to your submission or would you care to make some introductory remarks and perhaps add to your submission, which was prepared some time ago?

Dr Wardlaw—Certainly the climate around the issue of pest animals in Tasmania, specifically in state forests, has changed considerably since the submission was presented, particularly with the decision by the Premier in his State of the State address in September last year that the use of 1080 on state forests would be discontinued after December 2005. In response to that, anticipating that there would be some interest in our approach to alternatives to using 1080 on state forests, I prepared a presentation outlining our work in developing those alternatives which I have presented to the committee. Would you care for me to outline our plan for developing alternatives?

CHAIR—I will leave it to you, but be as brief as possible.

Dr Wardlaw—We have heard a lot about the need to protect plantations and regenerating native forests from browsing mammals, which in Tasmania are mainly native species. Our research over the last several years has been looking at getting a better understanding of the browsing problem. There has been a lot of work done looking at alternatives, but there is very little work being done to define the problem. Our research has centred on getting a better understanding of that, particularly mapping to be able to compare one plantation area against another and so getting an understanding of how browsing develops. We have been able to identify that many plantations which traditionally would have been considered at high risk from browsing have in fact been at low or moderate risk. One of the things that has come out of our research is that we have not had a very precise way of understanding or predicting just what the risk to a plantation or forest area would be from browsing. That has been a key outcome.

Following on from that has been the idea that we can develop a more integrated approach to managing browsing by having that better understanding of risk—having a risk based approach to integrated management of browsing. This is one of the key messages from looking at options other than 1080. 1080 is an excellent control for browsing mammals because it is so effective in a wide range of situations. The problem with the alternatives is that no one alternative is going to be anywhere near as flexible as 1080. So we are behind the eight ball. It does not mean, though, that those alternatives do not work. One of the problems we have had in the past in looking at alternatives is focusing on the situations where the alternatives have not been as effective as 1080 rather than looking at the situations where they can be as effective. That is one of the key

areas where we hope that our move away from 1080 to the alternatives will be successful. That is why we have built on the foundation of having a better understanding of browsing risk.

It is fair to say that in situations where traditionally we have used 1080 it has not been the most effective treatment. I am talking here about situations of extreme browsing risk where, no matter how many times you go and poison an area, you are still going to have browsing problems. You end up with plantations that have a halo of damage around the perimeter. If you measure some of those areas you might find 10 or 15 per cent of the plantation has failed to establish even with the application of 1080. So there are situations where 1080 is not the best option for managing browsing. By going to this risk based approach we are able to better target specific actions for certain situations of browsing risk.

The other thing to differentiate forest areas from farming areas is that the nature of our problem is much more ephemeral in terms of the area we are looking at protecting. With regenerating a native forest or plantation we are looking at a one-year window of vulnerability for the seedlings before they grow out of browse height. Once they are beyond browse height the problem tends to disappear. We have very few later age browsing problems in our forests; it is mainly that initial phase of plantation or native forest establishment that is a concern. That really does help us in being able to look at alternatives to 1080, because we do not have that need to protect over a long period of time. So things like repellents, which were clearly not a very useful alternative in pastures, do have a specific role to play in protecting plantations, for example, to slow the rate of browsing down on higher risk sites to allow shooting to be more effective. We are capturing some of these alternatives in specific situations.

CHAIR—What you are saying in your submission to the committee is that the use of 1080 in state forests is basically uneconomical in terms of the effect it is having on browsing animals, which has, as I understand it, prompted the government to make a decision to phase out the use of 1080 in forestry this year. If browsing animals are not controlled to the extent they are with 1080 at the moment, what positive or negative effect do you believe that is going to have on private property adjoining state forests?

Dr Wardlaw—I do not know that I am suggesting that they are going to be controlled to the extent that they are at the moment. Certainly 1080 is a very effective poison. But I think our move to look at alternatives means that we are going to be finetuning those so that they are more effective. There has been a lot of work done, for example, on the use of decoy crops and shooting to increase the effectiveness of shooting. We have research that shows that the use of decoy crops can increase your kill rate of shooting by 50 per cent—you go into a plantation and instead of getting 25 animals for one hour of effort you can double that and get 50 animals. Because you are encouraging the animals to move to areas that are more easily targeted, you are getting cleaner kills as well. Those sorts of efficiencies are put in place.

CHAIR—What is efficient about spending half a million dollars per year over the past few years to do research into alternative options to 1080 when it has only been costing you \$150,000 per annum to control the browsing animals with 1080?

Dr Wardlaw—The current cost of using 1080 is about \$150,000.

CHAIR—That is the current cost of research too.

Dr Wardlaw—The issue I have discussed with 1080 is that it is not effective in all situations. Particularly when you go to some of our high country plantations, where the seedlings are slower to establish, we have problems using 1080 to get effective control. We are still going to have problems with shooting in those plantations as well, so fencing and those sorts of options need to be considered in some of these areas. But the costs of the losses have not been factored in; that is just the cost of managing the browsing. We are not saying in there that we are 100 per cent successful. No grower can say that they are 100 per cent successful in managing their losses. I do not believe we can do that with our pest management processes; we are always going to have some losses. Putting plantations in some of these high country areas makes it more difficult to protect those plantations than those which have traditionally been established at, say, 400 or 500 metres.

CHAIR—Would it also be true to say that there is no guarantee that any of the research work that is going on at the moment, which is costing \$500,000 per annum, is going to have a successful outcome in relation to the findings of that research in the next couple of years?

Dr Wardlaw—That research has got us to a position where we can say with enough confidence that we have alternatives that we can put in place—that we can go and manage and successfully protect our plantations with alternatives other than 1080.

CHAIR—Can you elaborate on any of the alternatives that could be available to replace 1080 as a result of the research to date?

Dr Wardlaw—Some of that research is straightforward—shooting and making shooting more efficient is one of the clear outcomes; more particularly, how we can use strategies like repellents. We have done this in a number of plantations we predict to be very high risk. We have put repellents around the perimeter and have combined that with feed placement and shooting and have been able to protect that plantation quite successfully. The refinements with practice are going to be making each individual operation more efficient. I have advised my superiors that I consider it is entirely possible to manage on the basis of risk—having a better understanding of risk and targeting the specific management tactic to suit that level of risk—and that we have the prospect in the not-too-distant future of being able to have a more efficient management system than 1080.

Mr ADAMS—There are high-risk areas and low-risk areas. Would you like to elaborate on those? Some of the research, I think, showed that some areas have high populations and so very quickly a planting can be knocked over, whereas in areas of low risk there is not the same sort of intensity.

Dr Wardlaw—With the high-risk plantations, typically—to put this in some sort of meaningful context—you plant and, if you do not take action within a week or two, the plantation is lost. The most extreme case of that is a plantation where we saw 70 per cent of the seedlings destroyed within a fortnight of planting. With a low-risk plantation, on the other hand, the browsing does not progress much beyond 10 per cent of seedlings before the time the seedlings become established. Importantly, when we are looking at those risk situations, five years ago those plantations would all have been considered high risk and they would have all been treated with 1080. What I am saying here is that we now have a situation where 25 per cent

of the plantations which historically we would have treated with 1080 do not need management. If we can better predict those that will be a saving straight off.

Mr TUCKEY—What is the present commercial cost of a nursery-grown seedling in the ground?

Dr Wardlaw—I can tell you how much it costs to get a seedling into the ground. It is about \$1, by the time you take the seedling cost and the planting costs.

Mr TUCKEY—And how many thousand do you plant a hectare?

Dr Wardlaw—It is about \$1,000 a hectare to provide the seedlings and plant them.

Mr TUCKEY—And some little critters can do those in a night?

Dr Wardlaw—Absolutely.

Mr TUCKEY—Would you also add something on the reduced value of a tree if it is damaged at that critical stage—in other words, if it starts to branch out all over the place and becomes a bush rather than a tree?

Dr Wardlaw—The problem with browsing is not so much the problem of form. It can cause problems in form but the main problem is that it slows the growth down in that initial period. There are a whole range of things that come in later which are more associated with forks and things like that, which if you are growing sawlog are bad news. But, if you are looking at browsing, the impact of browsing on form is not such an issue. The main problem is the reduction of growth rates in that early establishment period.

Mr TUCKEY—On my earlier remarks about death being fairly permanent: if you were to come up with a nicer way of killing animals or keeping them off your property, how long do you think it would be before activists would just turn their attention to the new product?

Dr Wardlaw—Used unwisely, it would not take very long at all. It is a risk for forestry, which is a focus for many activists, that the spotlight will move to any lethal control we might have. From the perspective of both good economics and good management decisions, being able to go towards an integrated approach to management—so that you can say that the tactic you are using is the best tactic for that situation—will make the use of lethal controls much more saleable, if you like, to some of our opponents because we will be able to demonstrate that we are only using it in situations where we know we have to use it. That has been one of the problems in the past with 1080. Because it has been so cheap and the cost of seedlings—particularly replanting seedlings—has been so expensive, there has been the tendency to use 1080 in a prophylactic manner. Managers have been very risk averse in that situation and have tended to use 1080 as a prophylaxis rather than because of a demonstrated need. That was certainly the practice 10 years ago, for example, when more than 80 per cent of plantation areas would have been routinely poisoned.

Mr TUCKEY—What is your selective process with the actual bait? A minute ago, Patrick was talking about fox baits, which are bits of meat or whatever. Obviously, the bait for non-

carnivorous animals is grain mix or something. To what extent are you able to have selective baits that are not palatable to a bird or whatever?

Dr Wardlaw—This is going out of my area of expertise, by the way, but, from my understanding of it, if you were targeting possums versus wallabies, for example, you can change from apple to carrot or vice versa if you have a preference for one animal over the other. So there is some ability to increase the chances of getting one pest or another. I am not in a position where I can say that particular wildlife that we are not targeting prefer a particular type of bait. What I can say is that a lot of work was done five or six years ago to make sure that the baits we used were the most effective. The quality control of our baiting system for the use of 1080 was improved because there were a lot of problems with the way baits were prepared. We had different sizes of carrots and things like that, so getting a dose delivery right was difficult. But a lot of those problems have now been ironed out.

CHAIR—Dr Wardlaw, I assure you that if you are asked a question outside your area of expertise you only have to say so and that is sufficient.

Mr MICHAEL FERGUSON—Dr Wardlaw, I presume you were here during the time the TFGA were presenting. Do you dispute any of the figures that were cited—for example, that Forestry Tasmania would use about 25 per cent of the annual 1080 use and that by the end of this calendar year that would have been totally phased out?

Dr Wardlaw—My understanding is that the figures they quoted are correct.

Mr MICHAEL FERGUSON—I just wanted to clarify that first. That being the case, it seems to me that unless there is a particular new management regime that will come into place by the end of this year, Forestry Tasmania and indeed the state government will by default become very bad neighbours to the farmers who border the state forests. The farmers will continue to use 1080 for the foreseeable future. On that basis you would say that they are continuing to manage their pest populations. The Crown will not be. Does it not seem logical that there will be movement of increased numbers of pest animals in one direction—that is, from crown forest to private farmers' land? Isn't that a problem?

Dr Wardlaw—I would not necessarily agree with the comments you have made there. I do not believe the state forests will become a bad neighbour. Whilst we are not using 1080, our response to browsing is going to be nonetheless one that will reduce populations where populations are needed to be reduced. We are just going to be more selective with where we choose to apply that. We are using more expensive controls than 1080 currently costs. The comments that were made that I would thoroughly endorse were that the wider issue is one of population management rather than coupe level management. We do have at the moment an issue with managing a particular parcel of land. The overriding issue for the longer term is how we can better manage the population so that we do not constantly have to try to bring down the populations. How can we in the landscape try to keep populations at a more sustainable level so that we are not required to reduce populations repeatedly? It seems to be that our current regime of management is resulting in a steadily increasing population of all these pest species.

Mr MICHAEL FERGUSON—I ask this question with great respect—and I know that this was not a decision taken by FT; it was a decision taken at the political level and unfortunately

you have to live with it and still make it happen—and you do not have to answer it. I would be thinking to myself that you have been handed a poison chalice—perhaps an impossible dream. This decision has been handed to you; you have to implement it. Is there any level of confidence that it is achievable, realistically?

Dr Wardlaw—There is no disputing the fact that getting out of 1080 and adapting to that change is going to cause people some grief over the first couple of years. There is no doubt about that. We have a suite of alternatives which we know work in these situations and we think they might work in those situations as well. This is going to be a learning experience.

Mr MICHAEL FERGUSON—Again, with respect, it seems to me that you are really not confident. You are hoping it will work. The decision was perhaps taken too quickly. It was a firm decision that did not allow for some evidence that new regimes will work as effectively as poison. If you had not had the end of this calendar year as a target deadline to meet, I do not think you would be doing it off your own bat.

Dr Wardlaw—I think if you look at the figures for 1080 use for the next financial year, they will show an even more stark reduction than has been previously achieved with the reductions since 2000, when there was a conscious decision made by Forestry Tasmania to reduce use by 25 per cent over five years. We have exceeded that every year. I think the next year will show just how far we have gone in doing that because we have replaced the use of 1080 by shooting in such a large number of areas. It is not just Forestry Tasmania that is doing that; a number of growers are now using shooting more widely than 1080. I think there has been a shift. There was, I guess, some reading behind the lines of the altered requirements for the future use of 1080, in that you have to demonstrate you have got a problem by showing that in the past you have gone in and shot an area and that shooting has not worked and that you need a further control. We anticipated that that move was going to cost us many areas that we would have otherwise poisoned where that would have been sufficient control anyway.

Mr MICHAEL FERGUSON—If in two years time the mitigation that you are hoping to implement and that you are hoping will be successful turns out not to be working, would you or your organisation be prepared to ask the government to review its decision?

Dr Wardlaw—I will certainly be advising my superiors if it is not working, because we have an annual program of reporting on what condition our forests are in. With any management of any pests, we strive to constantly improve it. It is not just browsing mammals that we are doing research on; there are a whole raft of pests that we are doing that work on.

Mr SECKER—You seem to be dismissive of what you term the prophylactic use of 1080. There are many areas of management in a whole host of areas, whether they be agricultural or industrial—or even in human life—where the prophylactic method is seen to be a very useful way of keeping things under control. Why are you dismissive of that approach?

Dr Wardlaw—I guess it is the scientist in me trying to understand what we are doing and using things in a more informed way. It is better to be able to use a control only in situations where you know you have to use it and to be able to predict—or have monitoring systems in place which tell you—you need controls rather than going out and doing a blanket operation. Certainly there is no question that, where you have management systems in place that require

little thought—management by prescription—prophylaxis has a very useful role to play. But increasingly when you look at the forest management systems of today, particularly for sawlogs or veneering plantations, they are running a very intensive regime and require a lot of decisions along the way, through all stages of the growing. It is much easier in that situation to have in place decisions at each stage about the need to take a particular course of action or not.

Mr TUCKEY—I will just follow up on that prophylactic issue, if you don't mind, Patrick.

Mr SECKER—So long as I can come back to it.

Mr TUCKEY—Yes. The reproductive systems of all Australian mammals are totally responsive to the amount of food that is around. They are pregnant all the time, but they do not have their next virtual foetus until the conditions are adequate. We have tended to change that, particularly in the drier country, where an animal could otherwise not survive, with windmills and things like that. In that context, what can you do other than keep killing the parent? It strikes me that we have created an environment of continuous reproduction because we have changed the environment. I cannot see some sort of silver bullet being suggested as the alternative to 1080 or some other poison regime. You might also comment on the difference between the cost of a bullet and the cost of 1080.

Mr MARTIN FERGUSON—And whether or not you have been guaranteed, on an ongoing basis, sufficient additional resources to meet the extra costs of the alternative means of control to 1080.

Mr SECKER—That was where my next question was going.

Mr MARTIN FERGUSON—That is the key to this. Unless you have a guarantee on the resources, we are wasting our time.

Dr Wardlaw—I think this is one of those situations, Chair, where I say that I am not in a position to confidently answer that.

Mr SECKER—I want to go further on that, and I will understand if you only answer the first part of it. It seems to many of us that there has been a policy failure here in that you have been asked to react to a situation, getting rid of 1080, without proven alternatives. You are now trying to find those alternatives, so you may not wish to comment on that. But have you at this stage worked out what the extra costs are of these alternatives—which I think is a very important issue for the forestry industry—and what that might mean to the forestry industry?

Dr Wardlaw—We have gone through the process of estimating what we think the extra costs of management without 1080 will be and have advised that we think that the costs initially will be about double what they are now. By the way, that is the cost of 1080 without any changed regulation in its use. We foreshadowed, in doing that analysis, that 1080 was going to become very much more expensive to use in the next year or so, with increased regulation required to give a permit in the use of 1080.

Mr SECKER—That is hardly recent. As a farmer myself, I find it crazy to say, 'Something is going to go up because we are going to regulate it more and that makes us more competitive.'

Dr Wardlaw—I am not a regulator. I am responding to that.

Mr SECKER—I know. I understand your situation.

Dr Wardlaw—Having said that, I believe we advised that the suite of options we had for managing without 1080 were largely there and were available. I did not think we were going to get a whole new range of available options; it was just putting in place what we knew we already had. We had sufficient experience with the use of those options in different situations to be confident that they would work in the range of cases where we were going to require them to be used.

Mr SECKER—Are you using creosote at all as a deterrent?

Dr Wardlaw—No.

Mr SECKER—Because it does not work or because you have not tried it?

Dr Wardlaw—We have not tried it.

Mr SECKER—I have used it.

Dr Wardlaw—We have two repellents that are currently with APVMA for registration. On a high-risk site, a plantation that was completely destroyed in three weeks, by replanting that with repellents and by shooting we were able to bring the rate of browsing pressure right down so that shooting became effective. So in worst case scenario situations we know that we do have an effective control.

CHAIR—You might shoot more accurately when you can see the animals, without the trees.

Dr Wardlaw—Yes, no question!

Mr MICHAEL FERGUSON—All this trouble over 10 kilograms.

Mr SECKER—That is right.

Mr TUCKEY—I am thinking out aloud: to what extent has painless trapping been part of the process? In other words, use some good fencing with some entry points that are there on the first night but which become a large trap, just as you would trap livestock on a major pastoral property. I say that in the context of advice we have received today that there is an increasing market, once again, particularly for possum skins.

Dr Wardlaw—One of our districts has been very successful in taking conventional possum trapping and modifying the bait to get pademelons as well.

Mr TUCKEY—What is a pademelon?

Dr Wardlaw—A rufus wallaby. They get to be quite big. There is a lot of interest in trapping at the moment for just that reason: you have the option of being able to market the skins. Trapping is being used widely in one district, and certainly its use with possums is likely to become more widespread. Currently we are doing research to demonstrate that the traps can be used humanely to catch pademelons too.

Mr LINDSAY—Dr Wardlaw, can I take you to your submission where you talk about insects. You refer to the agrochemical companies who find innovative and new solutions and the fact they are not desirous of proceeding to registration of their environmentally friendly chemicals in forestry situations because of the cost of registration. That seems really unfortunate. What should the committee recommend to ensure that where companies do find environmentally friendly solutions they can in fact proceed to registration?

Dr Wardlaw—As I understand it, the APVMA were unable initially to vary their charges for proceeding with a label registration on the basis that it is a more environmentally friendly product, but subsequently down the track of the process of label registration they can vary it to look at a lower cost. I think it would be helpful if, at the outset, a chemical which was clearly an environmentally benign chemical could be assessed for label registration at a lower cost than a broad spectrum chemical. If there were different scales of charges for label registration based on environmental friendliness—particularly when compared with currently available chemicals—then that would be of benefit.

Mr SECKER—Californian biochemicals, for example, are about a third of the cost and take a third of the time to get approval—

Dr Wardlaw—That has not been our experience. A lot of work was being done on a bacillus strain to try to develop that as a control in very sensitive situations, and the company just said, ‘We can’t afford it, because the market with which you can use it is just too small to get the cost back.’

Mr LINDSAY—What is your advice to the committee on what we should recommend in relation to the lack of agreement on equitable cost-sharing arrangements between government and industry when you do detect exotic pest animal incursions?

Dr Wardlaw—One of the concerns I had, which was particularly amplified by a recent case of cost sharing, involved eradication of a nematode from pines in the Melbourne metropolitan area. That cost was shared fifty-fifty between the state and the Commonwealth on the traditional lines. What is proposed now, particularly for conifers, is that the cost would be 60 per cent industry, 40 per cent state government. The costs of that eradication campaign in Melbourne were greatly amplified because here was a commercially important species planted in amenity situations, where the cost of removal or any treatment was horrendously expensive. So you are looking at the forest industry paying very high costs for dealing with an eradication on an amenity situation. I think it is different to the model used in the animal sector. You are very unlikely to see cows as a domestic pet in a city situation, for example, whereas a lot of the commercially important species or their close relatives are planted in an amenity situation in these high-risk city areas.

Proceedings suspended from 3.35 p.m. to 3.57 p.m.

HALL, Dr Graham Phillip, Private capacity

CHAIR—Welcome, Dr Hall. 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 or would you care to make some introductory remarks and perhaps add to your submission, which was prepared some time ago?

Mr MARTIN FERGUSON—Could I just ask a question. Dr Hall, you are appearing as a private citizen. Did you draft the Tasmanian Game Management Services Unit submission?

Dr Hall—I did.

Mr MARTIN FERGUSON—Why then appear as a private citizen, rather than—

Dr Hall—My department requested that I appear as a private citizen.

Mr MARTIN FERGUSON—Sorry to be so inquiring, but these things do cross my mind.

CHAIR—Thanks very much for that salutary contribution, Mr Ferguson. Dr Hall, would you like to make some introductory remarks?

Dr Hall—The submission that I put to the inquiry several months ago pretty much covered everything that I wanted to say. When I read the terms of inquiry, the first point that raised in my mind was: what is a pest? I think that is a fundamental issue in terms of how we manage wildlife in Australia. What is a pest to one may be a resource to somebody else. There are a number of occasions where so-called pests are actually quite economically valuable species. Kangaroos are a pest to some and an iconic species to others—and are obviously on the coat of arms. We can talk about rabbits being pests, yet the rabbit industry is probably worth several million dollars. We can talk about feral pigs as pests, but pig-hunting is worth probably \$200 million a year. The definition of a pest is not merely a pedantic point but, if we talk about resources rather than pests, then we can manage for all sorts of outcomes.

The main thesis of my submission is that, if we put a value on a species and we use that species wisely, we have the ingredients of conservation. I would prefer to see a lot more resource management in Australia rather than pest management, because pests have a negative value and, as a society, we have had no history of properly managing things that we do not value.

CHAIR—Thank you very much for that short contribution. I agree wholeheartedly with you. The management of native species, in particular, is a very controversial issue with the vocal groups in our community and is therefore difficult from time to time for some politicians to handle politically.

Mr SECKER—Dr Hall, do you advocate a community based answer to all these problems? At the moment there seems to be government on one side, land-holders on the other side and environmentalists out there. The whole management idea does not seem to me to be working, because it is not coordinated and there is not community ownership of where we are going with this whole thing.

Dr Hall—I totally agree with you. I think the community aspect—and I am using the word ‘community’ in the broadest sense to include government at all levels, landowners and other stakeholders—has to be inclusive. My concern in Australia as I move around the country is that it simply is not. We have what I call silos. We have the federal silo, the state silo, the land-holder silo and the hunter silo. We can all sit around and talk about a particular issue but we will not develop those linkages between the silos. I see other programs, such as those run by the Game Conservancy Trust in the UK and some of the land grant university programs run in the United States, whereby those community relationships are very well established. I think they give us opportunities to build on in Australia. That is why I would like to think that these things are resources rather than pests, threatened species or whatever they are. The way I look at it is that wildlife is a spectrum: at one end of the spectrum you have threatened species and at the other end you have the overabundant pest species, if you will. Wherever you are on the spectrum, you need some level of management, and it is people that develop that management. So, to me, wildlife management is about people management almost more than it is about wildlife management.

Mr SECKER—I wanted to get that point across because I think Dr Hall had talked earlier on our tour about the land trust that happened in North America. They do seem to be further advanced in their management of the land grants process.

Mr ADAMS—With regard to the management approach to wildlife, I raised before the point that we have species which may be on the endangered list and then we have species like the wallaby and the possum which are causing issues for the economic wellbeing of some industries. What are your thoughts on how we manage that from an economic point of view? Is it possible to use the possum and the wallaby economically to help pay for the cost of the culling?

Dr Hall—I go back a step and raise a rhetorical question. This country has spent probably hundreds of millions of dollars trying to raise the status of various threatened species. It has spent hundreds of millions of dollars trying to eliminate, eradicate or control exotic pests. Yet I wonder how many threatened species are any less threatened because of our efforts and how many exotic pests are any less exotic pests because of our efforts. We have still got large populations of rabbits; we still have threatened species in this country. It seems to me that we are doing something that is not quite right, because we are not going forward.

You made a comment about whether we can use the economics. I think we can, but economics is not the only answer. I think community involvement is where we should be headed. Tasmania has a program that has been going for 10 years now called Property Based Game Management. There is really very little economics in that. It is a voluntary program which develops property based wildlife management plans. Plans are facilitated by someone from the government, but the plan belongs to the landowner and the other stakeholders in that property. There are now about 1.5 million hectares and about 500 properties covered by those plans in Tasmania. By getting the community involved, economics can also be involved. Some properties charge for hunting

access but a lot of properties do not. So the community involvement, I think, is a more important issue than the economics.

Mr TUCKEY—Your agency's title is the Game Management Services Unit. It would appear from your comments today and your submission that this is reasonably well developed in Tasmania, but you still have a concern, using your silos example, that it is disjointed. Consequently, it has deficiencies. What advice would you give to this committee on a national approach? I think there are bits and pieces of this idea all around the place. My constituents have fox hunts from time to time. I think they are more localised and do not bring in, say, the Perth sporting shooters club. You are a services organisation. Does that mean you coordinate only? How would you see a national approach, if I can use that expression, occurring? Clearly, the day-to-day activities are not for the Commonwealth. It could encourage through COAG and whatever else an approach based on giving otherwise known pests a value. In a perfect world, from your perspective, how would you put that together?

Dr Hall—There is a model, I think, to put that together—that is, the Berryman Institute, which is in the United States again. It is a national institute. It is based in the department of fisheries and wildlife and it is physically based at Utah State University. That institute has three main pillars: teaching, research and education. It is all to do with wildlife damage management. It has a core group or faculty, if you like, and I think there are about six core people in there. The various university partners contribute staff. Through all of those staff they contribute postgraduate students and so on and then they go out and form liaisons with the various states. It would be my thought, I suppose, that, if we had a Berryman Institute type of organisation based at an Australian university but as part of the federal bureaucracy, we could tap into the university system and also have the ingredients we need to develop the wildlife management tools in this country.

We are very limited in this country because we have really got shooting, fencing and poisoning, which are all lethal controls. Our methodology for wildlife management in Australia is not very good. If you look at it in relation to, say, an integrated pest management program for insects or weeds, where a bit of this, a bit of that and a dash of something else adds up to an overall management program, we are very limited in Australia in what we can use for our wildlife damage management, and that is really what pest management is about. My view would be that a Berryman Institute type of organisation with federal leadership would be the way to go. At the moment, each of the different states in Australia has its own department of agriculture or conservation and each is doing its own thing. Whilst there is some cross-fertilisation between states, there is not enough for the common issues, in my view.

Mr TUCKEY—Following through just briefly: you are now getting to somebody who says, 'Our institute has total responsibility for pest management.' I can see all sorts of philosophies entering that, but that is the starting point. You talk about a university. I would be a little bit worried about where the focus might come from that approach. You have given us one example, but I was really interested to know how this process would be managed at a more grassroots level. Taking a focus on, say, shooting, for example, where do we make the linkage between a tourist operator in a capital city wanting to tell some person from a foreign country how they can have a safari and the local property owners, as appears to be occurring here? What is your role in that at the state level? Avoiding your silos argument, how do we make that better?

Dr Hall—I am here as a private individual, so I do not really want to comment on how the department does it.

Mr TUCKEY—No. I am just asking you to reply based on your experience.

Dr Hall—I think firstly we have to step back and say: what are the common issues here? At the moment, cane toads may be a big issue in Queensland, but who cares about cane toads in Tasmania, other than from a philosophical point of view? We have to agree on some national issues. Once we have established those national issues, we can divide up the cake as to who does what. One issue that goes across species would be starlings. In my view, we have a developing issue in Tasmania with European starlings. As we are increasing our cropping, so starling populations are building up. Western Australia has a big issue with starlings, as do South Australia and Victoria. Perhaps if we looked at it from a ‘How do we manage starlings?’ point of view, then Western Australia could be doing its barrier control, South Australia could be doing something and Tasmania could be doing something else. At the moment, because of the silo approach, what happens in Western Australia does not really matter in Tasmania. So we have got to develop these linkages. This is why I think that a federal institute could provide some federal leadership and then establish those individual linkages between the states and between individuals in those states. At the moment, it is personality based. If I know someone in the Northern Territory who is working on something, then I talk to him. If I do not know anybody in Western Australia, then I do not really bother. So there has to be a philosophical starting point and then we can start to develop those linkages after that.

CHAIR—I will just come in on that point, if you do not mind, Wilson. Dr Hall, we are currently in the process of identifying some terms of reference for skills training in rural and regional Australia. Do you think we should consider, in that skills training inquiry, when we get it under way, the very issue that you have just described? More importantly, and to be more precise: should we, within the training structures that we might look at and make recommendations on, allow for a unit or a number of units targeting the training of people in the management of our own natural animal resources and placing greater emphasis on the need to protect those resources from predatory animals that have come in—or ‘exotic’ animals, to use your words? That term is more appropriate than ‘ferals’, as you rightly pointed out in your submission. Do you think that there is a window of opportunity for us to look at the need for training in that area in our next inquiry?

Dr Hall—I certainly do. Around Australia, in the old department of agriculture days, there was always an extension service. A dairy farmer or a horticulturist would ring up and talk to a dairy extension officer or a horticulture extension officer about this or that. My observation is that, as state departments, and indeed federal departments, have become restructured and reorganised over the last 20 years, that middle ground of extension officers has somehow been restructured out of sight. In many departments we have the high-level management, and we have the low-level people trying to keep out of the way and not be criticised or whatever, and there is no-one in between. So if a landowner rings up and says, ‘I’ve got a problem with dickybirds,’ who does he speak to? We still have our weed extension officers and insect extension officers, but who does that sort of thing with respect to wildlife?

Again, it goes back to the model of these land grant universities. I refer also to an organisation like the Game Conservancy Trust in the United Kingdom, a not-for-profit organisation that has

an extension service that consults all over Britain—indeed, all over Europe. Around Australia, there are very few organisations which provide extension material or advice for landowners on wildlife. That would certainly be a worthwhile area to pursue.

CHAIR—My final question relates to this: one of the problems that we have had—and I can only speak from a New South Wales point of view, as a former state member of parliament—has been the endemic culture that has been in-bred in relation to the attitude of national parks personnel to adjoining land-holders, and the effect that has had over the years in putting enormous pressure on our native fauna. Do you think we should be trying to work around that culture and have some training in some of our institutions that is not already there, based on the practical realities of the need to control exotic species? I refer also to the very distinct situations in Tasmania, such as the need to manage the native fauna species whose numbers are exploding because of the nature of European settlement.

Dr Hall—It goes back to what I was saying before about the spectrum of wildlife management. We have tended in Australia to see wildlife management as a matter of preserving the threatened species and somehow eradicating the ferals. There has really been nothing in between. I have had involvement with every conservation agency in Australia. There is a culture within them that says, ‘I’m a preservationist; I want to somehow preserve all of these native species.’ The words ‘conservation’ and ‘preservation’ are used interchangeably. I have a concern with that, because they mean quite different things. With respect to conservation agencies, I believe they are more preservation agencies than conservation agencies. That philosophy or culture is so firmly embedded within the agencies that it will take a mighty effort to change it.

CHAIR—You are doing some of that in Tasmania by way of this property based game management plan that you are working on with graziers through the Game Management Services Unit of the Tasmanian government. I commend the Tasmanian government and graziers for doing that, because it has enormous potential. I was pleased to hear, when we visited Connorville Station today, that there are plans to expand that to over 500 properties in Tasmania. That is a very compelling message to send to the mainland in terms of the attitude that you and I have just talked about.

Dr Hall—There are no plans to extend that. That is how many property based game management plans are in Tasmania right now. That is 1.5 million hectares. The Tasmanian government has been considering that program as a way of helping to reduce 1080 use in Tasmania.

Mr MARTIN FERGUSON—On page 2 of your submission you raised the subject of the Berryman Institute and you talked about Commonwealth-state cooperation. To your knowledge, firstly, has this issue been explored at a Commonwealth-state ministerial meeting and, secondly, has anyone applied to date for funding to set up such an institute? There is a pool of money, including federal money, for this type of thing at the moment.

Dr Hall—No to both questions. Certainly, the game management program has been successfully exported to the mainland. The Tasmanian government has exported this to about 600,000 hectares on the mainland in New South Wales and Queensland. I am aware that the Queensland Parks and Wildlife Service are exploring the model as a way of managing exotic

species in various parks in that state. But in terms of the more federal-state type of discussions, no, I am not aware of that.

Mr MARTIN FERGUSON—There is every chance the private sector and the Tasmanian government could put together such a funding application at the moment. There is money available for university research which could be explored.

Dr Hall—My understanding would be that a Berryman type institute would be a federal institute but just based at a university. It would not be another CRC or another division of the CSIRO.

Mr LINDSAY—I am interested in the R&D element of all of this. Part of the evidence that you gave to the committee in your formal submission talked about the research into deer genetics and environment as an example of what might be done. Has that particular research group been effective and delivered successful outcomes? Do they deliver what they should be delivering?

Dr Hall—Yes, they do. The RIDGE Group, which is the Research into Deer Genetics and Environment Group, have been going for nearly 10 years. They have mainly operated within the core red deer range in southern Queensland—in the Brisbane Valley and Mary Valley areas—and they have plugged into the notion that there are a lot of people who would like to shoot red deer. Landowners in that area have traditionally thought of red deer as a pest and would be quite happy to see every deer dead. But the RIDGE Group came along and convinced these landowners that there was an economic return for deer. I think it is \$12 to \$15 a hectare that contributing landowners are now getting from the activities of the RIDGE Group.

The other spin-off has been in relation to cattle tick. The Research into Deer Genetics and Environment Group has been doing some research into deer. A lot of landowners in the Crows Nest area have said that red deer carry cattle tick and spread cattle tick into clean areas. Through the research of RIDGE, they have been able to show that, yes, red deer do carry cattle tick but at a factor of 10 less than cattle. There is also work from CSIRO that indicates that ticks that have fed on deer blood are reproductively inferior to ticks that have fed on cattle blood. So the threat of red deer carrying cattle tick is nowhere near the perceived level that a lot of people thought it was. The group have been able to not only provide an economic return to landowners but scotch some of these myths.

Mr LINDSAY—Who funds this group—is it the landowners themselves?

Dr Hall—It is the hunters.

Mr LINDSAY—So there is no government involvement in funding the group?

Dr Hall—No.

Mr LINDSAY—How was it drawn together? Who took responsibility for putting it together?

Dr Hall—It was a gentleman called Clark McGhie. He lives at Imbil and was a deer farmer in the 1990s. The drought and reduced cattle commodity prices finished him off. He is also a commercial hunting guide. He was the one who put it together.

Mr LINDSAY—Do you think that such a style of organisation could in fact apply to dingoes, rabbits, possums or wallabies? Do you think that is possible?

Dr Hall—It is already happening in the sense that we have had the Sporting Shooters Association of Australia doing work on feral goats and other exotics in the Flinders Ranges in South Australia. The Tasmanian property based game management program involves people from the Australian Deer Association, SSAA and the Tasmanian Field and Game Association. The formal hunting organisations are very much involved in all of these programs.

Mr LINDSAY—Moving to another subject: you have today called for federal leadership to coordinate departments of agriculture across the states. You have called for an institute in the same style as the Berryman Institute. In operating in the science area that you operate in, have you ever thought that national institutes in fact do not deliver what they are set up to deliver but get bureaucratic—that they become self-perpetuating but do not actually produce a result?

Dr Hall—I was an inmate of CSIRO for many years and I was compulsorily retired at the age of 37, so perhaps my view of federal institutions is a bit coloured. In the days when I worked in CSIRO it was actually a lot more focused on and driven by real issues than perhaps it is now. I am not trying to dump on CSIRO. When I was in it, we had a division of entomology and we had a division of wildlife research. Now we have a division of entomology and I am not quite sure what it does. We have a division of sustainable ecosystems. What does that mean? While a lot of the work that is being done by CSIRO is very good, I wonder how many feral pigs it has controlled tonight.

Mr LINDSAY—You said something earlier about your contacts across the states being personality based. Do you think that national leadership organisations really work best if in fact they are personality based and that, if the leader of that national organisation gets off their butt and drives the organisation to actually deliver the outcomes, then it works but, if you do not have that kind of a leader, it is not going to work?

Dr Hall—With any team, you have to have a dynamic leader. It does not matter whether it is the Australian cricket team, the Collingwood football team or whoever.

Mr ADAMS—Or the Liberal Party.

Mr LINDSAY—Nine years and counting.

Dr Hall—Any team has to have a dynamic leader who is the keeper of the vision. If the leader can say, 'I have the vision; follow me into the promised land and everything will be better,' that has to be better than somebody who is just there to make up the numbers. It does not matter whether it is a sporting team or a scientific organisation. When I was in CSIRO, Dr Doug Waterhouse was chief of the division of entomology. Doug was not only a very good scientist but a very good leader. Perhaps that is a deficiency we have at the moment—that the people in

all of these organisations may be very proficient bean counters but in terms of getting the job done and motivating the troops may be seriously lacking.

Mr WINDSOR—I will just follow up on what Mr Tuckey was saying earlier. I personally think the concept you have is a good one. I guess it gets to the culture of organisations. I am a farmer so I can only think of two organisations that at some stage have had a decent culture: one was the Soil Conservation Service in New South Wales; the other was part of the department of agriculture. If we were to move to some sort of national approach to game management, how do you respond to the possibility that Mr Tuckey raised? I hope I am not verballing him. Given that the bureaucracy is so much further away again and has almost been throttled over the years, don't we run a risk of the agenda being captured? It might start out as a well-meaning game management plan, combining farmers, land management, land users, government et cetera, but then it might change. How do you respond to that? How do you avoid that happening?

Dr Hall—If we just tacked the Berryman Institute onto something else that is already in existence then, yes, we would have a problem because you would import the baggage from one to the other. I think it has to be a brand-new, squeaky clean, no-agenda, no-background type of institution, but it also has to have what we have talked about here: the leadership of it, the management, has to be very personality driven for a while to embed that new culture into the organisation. It is certainly achievable. The Game Conservancy Trust in the UK is a very good example of where that has happened. Some of the perhaps community based type programs on deer management in the United States, the Quality Deer Management Association, Quail Unlimited, Ducks Unlimited, and those sorts of organisations, have very clear focuses and very dynamic leadership and personnel.

Mr WINDSOR—What say does government have in relation to those organisations? Are there any national organisations?

Dr Hall—Certainly the Berryman Institute is national. The Game Conservancy Trust now receives millions of euros from all sorts of governments, and obviously governments are not going to give millions of euros if they do not have a say in how it is spent. I think there are models around for how this could work.

Mr TUCKEY—I see more value in a structure than in a bureaucracy, but someone needs to write up just how to make it work.

Dr Hall—The Berryman Institute now works in about 20 US states. Whilst it is an umbrella organisation with a core group of people, its tentacles are very wide reaching.

CHAIR—I am conscious of the time. I have to make the comment that it was very appropriate for the member, Mr Windsor, to talk about the issue of the Soil Conservation Service. I and one other person voted against the whole parliament to stop the amalgamation of that with a large bureaucratic empire. The point that he made was very relevant. Dr Hall, thank you for your contribution this afternoon, for your submission, which was very detailed and very specific to the terms of reference, and for the time spent with the committee earlier today. It was very much appreciated.

[4.33 p.m.]

BARNES, Mr Christopher David, Forest Industries Association of Tasmania

BIRD, Mr Trevor, General Manager, Forests and Forest Industry Council

CHAIR—Welcome. 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 and, 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 any opening statements?

Mr Bird—I would be happy to enlarge a little bit on what we would like to present to you in total.

CHAIR—That would be quite appropriate.

Mr Bird—Firstly, let me apologise for not having given you a written submission. We are very grateful to have been given the opportunity to make a presentation today. We feel this is a very important and significant matter for the future of forest industries in Tasmania and we hope very much to be able to present today some information that will help you consider our cause in a fair and objective manner. I have a long history in the forest industry. I am a graduate of the University of Queensland and the ANU with a forestry degree. I spent about 24 years with CSIRO. Since then, in the main I have worked as the forestry contact person at the Tasmanian Trades and Labor Council, and I now work with the Forests and Forest Industry Council.

I believe that the committee understands the function of the Forests and Forest Industry Council in Tasmania. The council is composed of about 20 other organisations. It has an executive of 10, who are the main groups that have a fundamental commercial interest in forests, and there are another 10 that have perhaps less of an economic interest but a very strong and significant social interest in forests, including Timber Communities Australia, the Tourism Council, the Traditional and Recreational Land Users Federation, the Local Government Association and so on.

I wish to confine myself to one topic today. Mr Chris Barnes, who is representing the Forest Industries Association, will deal at greater length with other aspects of the topic, especially from his perspective as manager of a large plantation industrial estate in Tasmania. My interest today is in browsing and the use of sodium fluoroacetate, or 1080. We have browsing damage caused by the introduced rabbit and deer, but the main damage to forests in Tasmania in terms of animal browsing comes from native animals. The native animals causing damage include potoroos, possums, wallabies and wombats. These animals have a preference for the sort of vegetation we grow. They have existed on it for many millennia and are very well adapted to the species we plant widely on tree farms. The reason, in the main, is their reproductive biology.

We seek to make our regeneration methods successful by emulating native ecology wherever possible. This means we use selective harvesting and clear-felling techniques that produce gaps

in a forest. Young trees regenerate in these gaps, and we often use fire to encourage regeneration by ensuring that there is a receptive seedbed available for germination. This management process follows the natural sequences that have occurred in the past—especially in the case of wildfire—and the biology of native browsing animals is well conditioned to take advantage of these circumstances. Our problem, then, is that we manage on a much smaller scale than nature does. Animal numbers explode when and where feed is provided, but our coupes are not on a landscape scale of wildfire. This means that animal numbers build quickly and they concentrate their feeding on small regenerating areas. This causes a serious commercial problem for the tree grower. We use two methods to control this problem: reducing the sudden surge of browsing animals and creating physical and other barriers to entry.

I have some graphs from the *State of the forests report*, which show the actual counts of animals from spotlight surveys in the forests. You can see that the pademelon, potoroo, Bennett's wallaby, brush-tailed possum and common wombat have either stable or expanding populations. Notwithstanding other stories that you might hear, I have here the factual scientific report of the populations of browsing animals in Tasmania. As you can see, their numbers are steady. There has not been any decimation or wholesale slaughter—or any other such pejorative terms—in our management of animals in this state.

I do apologise today for the fact that the Browsing Damage Management Group could not be here. This group is chaired by Dr David DeLittle, who has many years of expertise on this matter. It is unfortunate that he is out of the state, but I would like to place on record the very useful web address of the group so that your staff can follow this up for you. It is www.browsingdamage.org.au. This is quite an expert group, which has considered this topic in great detail and with a large input of science. You will find much more expert information on 1080 available on their web site than I am able to provide to you. You will find that 1080 is a naturally occurring substance. It does not accumulate in body tissues and it is biodegradable in soil and water. Nevertheless, its use remains unpopular in some areas, and the forest industry seeks to minimise this criticism by reducing its dependence on 1080 to control browsing.

I cannot profess to be an expert on it, but I will refer to the work we have been supporting in an attempt to find acceptable management alternatives to the widespread use of 1080. As you will have heard and as you will hear from others, 1080 is used as a last resort. It is used as part of a suite of mechanisms, and we are very careful in the way that it is applied, administered and controlled. The forest industries are well in advance of the Tasmania Together targets. Indicator 24.5.1 of the Tasmania Together report shows that we are 12 months in advance of the target of 7.6 kilos set for 2004. Our usage was down to 6.15 kilos last year, which was down again from 10.4 kilos in 2003. So we have been making a considerable effort to lessen our dependence on 1080.

Mr MARTIN FERGUSON—That is going into private forests?

Mr Bird—That is for the whole of Tasmania. The forest proportion of that is 1.4 kilos, down from 2.4 kilos the year before. In 2003, we used 2.4 kilos; in 2004, we used 1.4 kilos. Something like two tonnes is used in New Zealand each year for the control of our possums and their deer. We are painfully aware of the undertaking by the Premier to withdraw 1080 from use on public forest land by December 2005.

CHAIR—Was that done jointly as an agreement between the state and federal governments?

Mr Bird—I think they have both come to the same conclusion but by their separate ways.

Mr MARTIN FERGUSON—At the last election, both major political parties committed to the target of withdrawing 1080 by the end of this year. My recollection is that both their announcements included that.

Mr TUCKEY—I think you are probably right. When I was asked about that by Martin, I said that I didn't think we had any objection to it. So I wonder who worked that out.

Mr MARTIN FERGUSON—I thought I was right. That is why I checked with you.

Mr TUCKEY—Yes, you are right.

Mr LINDSAY—You were painfully aware of the government's decision.

Mr Bird—I am speaking for the Forests and Forest Industry Council, which has 20 members, some of whom are Forestry Tasmania and some of whom are not.

Mr LINDSAY—But did you say that?

Mr Bird—I did say that, and it is a matter of much discussion at our meetings. I am there to do the bidding of all of the members; I am aware that they have different views on this matter.

Mr TUCKEY—I made the point with another witness that, as death is so permanent, why are we looking for an alternative to 1080 if death is going to be part of the control mechanism, be it by shooting, some other poison or whatever? In your expert opinion or that of your members, are you prepared to make some comments about why this particular poison is so much worse than, say, any other? I do not know where strychnine, or some of the others, stands these days. If we are saying that the process is one of preventing the poisoning of animals, I could understand it, but we seem to have this hysteria now about 1080. It is a naturally occurring substance in Western Australia. In fact, you would not use it to get rid of possums in Western Australia because they are all immune to it—most of our native animals are. Is this political response just hysteria, in your view?

Mr Bird—My personal view is that we are catering to the after-dinner anxieties of the comfortably well off.

Mr MARTIN FERGUSON—That is a good expression.

CHAIR—I know we rudely interrupted you. Please continue.

Mr Bird—There are of course more expensive options to 1080, as Mr Tuckey pointed out: arsenic, strychnine and so on, which are less discriminating. There is also the process of shooting and there is also exclusion. Exclusion is another form of starvation. The net result is the same in every respect, I think. We are an industry that is conscious of our social obligations and we are

doing what we can to reduce our dependence on 1080. We need to stay in contact with the view of the larger population, I think, and we endeavour to do that wherever we can.

Over the last 10 years, the Temperate Hardwood Forestry and Sustainable Production Forestry cooperative research centres have undertaken significant research on a number of alternatives to 1080. The FFIC has contributed \$220,000 in the last couple of years to efforts in that respect. We have two trials under way at present: one on risk assessment and another on the use of cover crops. We would expect to be more and more involved in this type of experimentation in the future. The plan in the industry is to integrate these opportunities and alternatives to provide a suite of tactical options tailored to our assessed idea of risk, the site, the species, the crop and the animal.

Some of the things that the CRCs have performed with support from industry bodies include some trials on natural genetic-based resistance of *Eucalyptus globulus*, the blue gum. Different provenances of blue gum have been observed to differ in their defensive plant chemistry and resistance to browsing animals, and possums in particular. North-east Tasmanian provenances are the most palatable to these animals, while southern Tasmania and the Strzelecki provenance in Victoria are the most resistant to browsing. This suggests that there is a genetic basis to resistance and harnessing the right defensive chemistry may mean that a plantation is less subject to attack.

We have also looked at altering the palatability of seedlings via manipulating environmental conditions. It is known that nursery conditions can alter the palatability of planted-out seedlings. *Eucalyptus nitens* in particular, with high nutrient regimes, are favoured by browsers. The leaves are less tough, they have less tannin and there is more nitrogen in them. Tall plants are less browsed for obvious reasons. The point I make here is that we can grow spindly, undernourished stems in an attempt to evade browsing because they will not be eaten. But whether they will quickly occupy a site and produce a commercial crop is a moot point. I have presented to the committee support staff a copy of the research papers on which these comments are based, and I hope that they will go into the record with other material.

We have also assessed the use of repellents. Abrasive repellents on the leaves have their place, but durability of the material and recoating in the field are issues. Chemical repellents such as synthesised carnivore urine—I understand that mock lion urine was used—can be effective. Noise repellents have been tested. There is one promising line under investigation at the moment that uses the playback of recorded animal danger signals such as foot thumping and so on. Given that that is an instinctive thing we do not think that they will grow out of that, whereas making a clamour and so on does not really do much—they quickly learn to avoid that.

We have also put some money into testing the use of cover crops. We have long known that seedlings sitting in cutting grass and bracken are less browsed. Besides hiding them, both of these covers are less palatable and render the seedlings less likely to be visited. Other unpalatable covers that have shown promise include bitter lupin and thistles. As you heard from Dr Wardlaw of Forestry Tasmania, who spoke to you earlier, we have also supported the assessment of plantation characteristics. Our point is that there are factors that can be manipulated: area-to-perimeter ratios; the amount of close canopy close to edges, as open surrounding forest is usually favoured by browsers; the amount of shelter close to boundaries; and internal coupe shelter such as thickets, windrows, rock piles—those sorts of things. So you

can concentrate your effort on small parts of a plantation or on small parts of a coupe and find that you will get rid of a large part of the problem and that much of the coupe that is either less accessible or more remote will be browsed less. So design can help you.

Our aim, as I have said, is to harness these different approaches into an integrated pest management strategy. That will involve other processes and procedures such as exclusion and shooting. I am going to pass to Chris Barnes of FIAT to discuss those. I remind you that there is some material and I will provide copies of it to the committee staff, including the graph that I have neglected to give them. I apologise for not having enough copies of the graph for all committee members and I thank you very much for your patience in accepting our presentation.

Mr Barnes—I am the manager of a 35,000 hectare plantation estate in the north of Tasmania, establishing approximately 5,000 hectares per annum. I would really like to highlight a few things that Trevor has touched on throughout his presentation in relation to browsing animals and also the impact of insects within plantation estates and the importance of insect management. There are two points. We are all aware of the strong drive to increase the plantation base in Australia with initiatives such as the 20/20 vision. We are all aware of the drive by the company Gunns Ltd to establish a pulp mill in Tasmania. Two of the biggest threats to the successful establishment of plantations, in this state at least, are browsing animals—as Trevor has touched on—and insects.

Firstly, on browsing animals, you have heard through the submissions of Forestry Tasmania and the Tasmanian Farmers and Graziers Association about the threat of browsing animals to established plantations. I fully support their submissions. We need to be aware that we are talking about effective management of a crop. A lot of the discussion and questions earlier with regard to 1080 focused on forestry use. 1080 is widely used in this state in both forestry and agriculture and we need to be aware of that. In relation to forestry, 1080 is not just used in plantation establishment; it is also used for establishing native forest regeneration in situations where forests have been harvested and we are regenerating a native forest situation. We need to be aware of that.

The TAPG submission highlighted that 1080 is used as a last resort in game management. Trevor noted that as well. Just to illustrate that with an example from the last couple of years, if you look back at the figures from 2001-02 on FIAT members, around 50 per cent of their browsing management expenditure was on shooting, trapping and fencing and around 50 per cent was on 1080 use. That was in the 2001-02 financial year. In the 2003-04 financial year, that changed to 72 per cent of expenditure on shooting, trapping and fencing and only 28 per cent on 1080 use. So there has been a really strong drive within the forest industries to reduce 1080 use. But doing that has come at a cost financially and also in a productivity sense. The shift in game management techniques to more shooting and trapping has increased the per hectare game management cost by 63 per cent for that organisation.

A simple move to 100 per cent shooting, trapping and fencing without access to 1080 would reduce the productivity of a lot of plantations. Although the 2020 Vision talks about hectares planted, we also need to be conscious of the amount of wood that you get from those hectares. There is not much point establishing all of those hectares and not getting the wood off the ground at the end of the day. Reducing access to 1080 would, in the worst case, deny plantations to a lot of farm organisations and private forestry companies in a lot of areas. There are a lot of

lease agreements and share farm agreements entered into with landowners. Through high game pressures, private forestry companies would just walk away from those areas and would not look at establishing plantations. It is a matter of simply not being able to control the game on those blocks regardless of the amount of shooting, trapping and fencing that is undertaken.

Another point in relation to forestry and something to be conscious of is that forestry does not exist in isolation. We are out there with farmers who are trying to establish pastures, crops, horticultural operations and a whole range of different agricultural enterprises in this state. By not controlling game in a forest situation you are effectively being a bad neighbour to those other agricultural users out there in the environment.

Something I would like to touch on—and a fair bit of publicity has been generated in relation to insecticide use in this state over the last six to eight months—is the use of insecticides for the management of defoliating insects. I know that Forestry Tasmania touched on it. It is a crucial tool to plantation managers. It is just like the use of insecticides in growing crops. Forest growers in Tasmania need continued access to insecticides and the techniques they use to apply insecticides. Forestry growers in Tasmania undertake a rigorous insect monitoring and forest health surveillance program. Less than five per cent of a given estate is sprayed in a given year. One of the points we need to remember in forestry is that there is a perception that they are big users of chemicals, be it 1080 or insecticides. I know it is not part of this committee's terms of reference, but there is a big belief out there in the community that forestry is also a large user of other chemicals like herbicides. If you were to look at the number of plantations in this state that do not have any chemicals applied to them whatsoever, I think a lot of people would be surprised. Less than five per cent of an estate being sprayed for insects is a very small area.

Aerial spraying in forestry situations in Tasmania comes under the control of state based legislation: the code of practice for aerial spraying. All neighbours are notified of planned spraying operations. Water samples are taken before spraying, after spraying and immediately after rainfall events. As I say, very few hectares are sprayed, but when we do need to spray for insects it is absolutely crucial. It is not a matter of losing one or two years growth on the trees; it is often a case of losing a crop altogether. That is all I would like to comment on in relation to continued access to 1080 and to continued access to use of insecticides.

I would just like to touch on the APVMA. Obviously it performs a vital role in administering, registering and providing continued access to chemicals for the management of pest animals. It is noted that two weeks ago the Agricultural and Veterinary Chemicals Legislation Amendment (Levy and Fees) Bill 2005 was passed through parliament. It is understood that that bill was passed to provide greater revenue streams for the APVMA. As an industry, we would like to see that the increase in chemical costs that are going to be associated with the passing of the bill will provide benefits both to the forestry users and to the environment. One such benefit that we can think of immediately is an increase in efficiency of the APVMA. With regard to the terms of reference of this inquiry, a current review of 1080 commenced in 2002. It is now 2005 and we are still waiting for that organisation to release their draft review report on 1080 for public comment. So three years have passed and we are still waiting for that.

Mr TUCKEY—Is that good news or bad news?

Mr Barnes—It provides us continued access, I suppose, until they come out with their findings, but we think it provides insecurity, not only to users of the product but also to organisations that have employed staff and have got money invested in contracting access to that product as well. So we think it is bad news that it is taking so long for a review.

CHAIR—Given the time frame that is available before the phasing out of 1080 in Tasmania and given the research which you have pointed out to this committee this afternoon that centres around genetically modified plants in some instances so that the taste, texture and physical characteristics become obnoxious or unattractive to the pest animals that are creating problems for you, how far away are you from getting positive research outcomes on those particular research projects before the deadline for 1080 to be phased out?

Mr Bird—We will be underprepared.

CHAIR—To what extent?

Mr Bird—The things that you can breed for and the things that you can afford to breed for—and I am no expert geneticist—are pretty few. You might go for four inherited traits, which might include vigour, shape, the maintenance of a large crown and things like that. Palatability is one of the things that is further down the line. Getting that included amongst the suite of genes that you want inherited will take a considerable number of generations.

CHAIR—That is precisely why I asked the question. I suppose it leads to the question that is probably foremost in everybody's mind—that is, to what extent after the 1080 deadline is reached will the industry be able to offer a substitute that will keep under control the pests that are creating the problem now, given the long-term time frame of the genetic modification research projects having a positive outcome? The second part of the question is: do you agree that it would appear that the decision to phase out 1080 in an election process has created a very unreal and unrealistic imposition on industry to try to comply?

Mr MARTIN FERGUSON—That is called a leading question.

Mr Bird—To go to the first part of the question, we are going to have to rely heavily on other methods of reducing numbers—shooting and so on.

CHAIR—More costly methods?

Mr Bird—More costly methods.

Mr TUCKEY—What is the status of other poisons—strychnine et cetera? Have they been barred in the past? I suppose I should know.

Mr Bird—I do not think they are. Rather than being barred, I do not think they are favoured, because they are less discriminating. All sorts of animals are affected by strychnine.

CHAIR—It is also very risky to use.

Mr Bird—Yes. So 1080 is regarded as pretty safe in that respect.

Mr TUCKEY—You might be able to sprinkle a bit of it around Parliament House!

Mr WINDSOR—I hope that is not on the *Hansard*.

Mr Bird—Shooting is one of the very few alternatives we have. It is going to be more expensive. It is difficult to get adequate and fully professional shooting operations. I suppose that will grow with time as remuneration and need reflect the urgency. I was fairly closely involved with the industry in the lead-up to 9 October, and both parties came out with policies that had 1080 mentioned in them—and I do have a copy of the Liberal Party policy with me.

Mr SECKER—Their federal policy?

Mr Bird—Yes. This is the only germane one.

Mr TUCKEY—Which department did it come through—Environment or Forestry?

Mr MARTIN FERGUSON—PM&C.

Mr TUCKEY—I would not be surprised.

Mr Bird—It said:

A re-elected Coalition Government will work with the Tasmanian Government and commit \$4 million over two years to fast track research into alternative methods to protect new planting and to end the use 1080 poison baits on both public and private land as soon as possible and no later than December 2005.

That does not mention forestry. To me, that means across the board.

Mr MARTIN FERGUSON—It goes further than current Tasmanian government policy, which is only on crown land.

Mr Bird—Yes—and only on forests.

Mr MARTIN FERGUSON—What has the Tasmanian government's response been to that position, which is more advanced than the Tasmanian government's position?

Mr Bird—I understand that negotiations to which I am not party are occurring.

Mr MARTIN FERGUSON—So it has not ticked off that position as being the right thing for Tasmania at this point?

Mr Bird—I have not heard the outcomes of the discussions. We were left in some wonderment when we saw that.

CHAIR—We are left in some wonderment here today.

Mr MARTIN FERGUSON—The current position in Tasmania is that the change will occur on crown land by the end of 2005 and that there is no deadline on private land and on non-crown land forests other than the 2005 one?

Mr Bird—That is correct.

Mr TUCKEY—The words are a bit ambivalent. Although they say ‘no later than 2005’ it is a sort of target, isn’t it. I am not trying to defend it, to tell you the truth; I think it is outrageous. It is a matter for us to respond to, I think. I have a further question. I want better clarification: suddenly 1080 is an issue, notwithstanding—and I have said this to earlier witnesses—that it is used universally throughout the world as an agricultural tool. There is also a similar issue with aerial spraying of insecticides and herbicides. In my electorate, this is very common. In fact, sometimes in responding to rust and things like that after heavy rain there is no other solution. But all of a sudden newspapers have picked up a view that aerial spraying is dreadful because it is in some way associated with plantations—which, I might add, were an invention of green activists; I wrote back to them on this point the other day. What do you want to say about that? It is as plain as the nose on my face that suddenly 1080 and aerial spraying are issues because they are related to the forest products industry. Are you prepared to confirm that? They have been in common use forever, and all of a sudden we have these massive campaigns which politicians feel obliged to respond to.

Mr Barnes—I agree wholeheartedly. We have many examples where aerial spraying is difficult to undertake in cropping areas, where potatoes and other crops are continually being sprayed, and when there is an opportunity to spray the plantation by air it is looked upon in a negative light.

Mr TUCKEY—Aerial spraying was around a long time before plantations.

Mr Barnes—Yes.

Mr Bird—There has been a very successful campaign to inflate fears into panic amongst some folks—detractors of the forest industry. If we sprayed distilled water we would be in the same sort of pickle.

Mr TUCKEY—That is right.

Mr MARTIN FERGUSON—Regional forest agreements provide for compensation where the terms of those agreements are changed. There is an additional cost to the private sector if the government’s policy of phasing out 1080 on private land is implemented. Do you regard that as a compensatable issue or potentially a compensatable issue under the regional forest agreements? Is it open to argument?

Mr TUCKEY—That is the point: would you put that argument to us?

Mr Bird—We would strongly pursue that argument. I know that there are specific clauses under, I think, No. 95 that talk about contracts that are in place and so on. But we would regard the use of chemicals, and 1080 in particular, as a valid contract.

Mr MARTIN FERGUSON—I would seek that you examine that with a view to actually putting a position back to us with respect to that issue.

Mr TUCKEY—And including the 2020 vision. It is the same thing—possibly more so.

Mr MARTIN FERGUSON—You have already referred to the fact that the changed method of control is adding additional costs of about 60 per cent per hectare. Is that right?

Mr Barnes—Correct.

Mr MARTIN FERGUSON—Which is an added cost to the private sector.

Mr Barnes—In addition to that cost, there is also the reduced productivity on some of that land.

Mr MARTIN FERGUSON—That needs to be explored and filled out in a further submission.

Mr TUCKEY—Particularly with regard to the 2020 vision. The government's target is hectares and yours is tonnes—and of course that is pretty logical.

Mr LINDSAY—Gentlemen, do either of your organisations put money into research into pest animals? If so, where do you put it and do you think you get value from the money spent?

Mr Bird—The Forests and Forest Industry Council puts significant funding into research into pest animals, principally through the CRC. We believe that we get good value out of that avenue of research support. We think the CRC is a good program.

Mr Barnes—We are also supportive of the CRC.

Mr LINDSAY—Do you get value for money?

Mr Barnes—Yes.

CHAIR—Mr Barnes and Mr Bird, thank you very much for the contribution that you have made this afternoon. We apologise for the lateness of the hour, but that is the way these inquiries work. We have documents presented by Mr Bird. Is it the wish of the committee that the submission be received as an exhibit and authorised for publication? There being no objection, it is so ordered.

[5.15 p.m.]

GRAHAM, Mr Alistair, Tasmanian Conservation Trust

CHAIR—We have received a submission from the Tasmanian Conservation Trust. I will put it to the committee to receive it as evidence, and I intend giving the person who delivered the petition five minutes to comment on the summary section, which I will read out. First, is it the wish of the committee that the submission be received as evidence and authorised for publication? There being no objection, it is so ordered. I now ask Mr Graham to present a five-minute oratory to the committee based on the summary, which says:

In summary, it remains the TCT's strong view that the Prime Minister should be pressed to deliver on his pre-election promise to end 1080 use against native wildlife in Tasmania and to use some of the \$4 million available to develop a support and assistance program for any landholders with verifiable adjustment problems.

Mr Graham, could you make a five-minute statement on that, given the time constraints that we have.

Mr Graham—Certainly, Chair, and thank you very much. I work for the Tasmanian Conservation Trust. I have a first-class honours degree in agriculture and forest sciences from the University of Oxford and almost 30 years experience working in the natural resource field as an advocate for conservation NGOs. From that point of view, I am really grateful for the opportunity to make a brief submission to this committee. Having heard things today, I thought it is really important that you hear from someone who can at least articulate a sense of why this has become such a big issue that the Prime Minister and the Leader of the Opposition should both have felt bound to make significant statements before the last election. From our point of view, as operators in a working democracy, we feel that holding the Prime Minister to an election promise is one of the most important things to be done, and we are certainly looking to this committee to help us in that respect. If anything could be done to facilitate any impacts that might be felt on industry in implementing that promise, we will be the first ones to support and advocate that that should be done, including using the compensation provisions of the RFA. This is not a sense of blame or harm; this is a sense of effecting something that is widely supported in the Tasmanian community.

I think it is really important that the committee appreciates that only in Tasmania is 1080 widely used against native wildlife. Throughout the rest of Australia, with one minor exception for one wallaby population, it is widely used against feral animals—pigs, goats, cats, foxes or whatever—in far more targeted ways. The Tasmanian circumstance is unique. We have gone out of our way to intimate to people not from Tasmania that this is a Tasmania-specific relief that we are looking for—this is not a general thing across Australia. And this applies only to the use of 1080 against native wildlife; it does not apply to the use of 1080 against foxes, which is something that the Tasmanian Conservation Trust strongly supports, not only here in Tasmania but across Australia generally. We feel that the PM made a clear, focused and informed decision about what should be in the pre-election platform for the last election. I was significantly and intimately involved over a long period of time in developing that position. We regard that as a

good thing to have achieved and we think it is only appropriate that it should be implemented as given.

CHAIR—We can have a couple of brief questions.

Mr TUCKEY—What about the figures put to us by the previous witnesses which show that there has been no reduction in the numbers of these animals?

Mr Graham—Our case rests: whether or not you use 1080 does not make any difference. There are two ways of looking at things: the glass is half empty or half full. That information does not actually address the policy question before us.

Mr WINDSOR—We have heard from a number of witnesses today and, contrary to what you said at the start in your five minutes—and I know that was not long—no-one has told us why 1080 is being removed, other than it seems to be an anathema to use it on a native animal.

Mr Graham—Yes. You have heard some rather derogatory comments about the chardonnay set today. It is really important to appreciate that the use of such an indiscriminate poison against native wildlife is regarded as abhorrent throughout almost the entire community in Tasmania. This is what the Tasmania Together consultation process made everyone realise. We did not know how widely felt this concern was in the community. The most ardent shooter is just as concerned about the use of 1080 in Tasmania as the most ardent dog lover. It really is a consensus in the community, and that is what the polling is showing both major political parties. There is no doubt whatsoever that that is the case, and political parties are properly responding to deeply held sentiments in the community that do have a real impact on nature conservation values out there in the real world as well.

Mr WINDSOR—Is your organisation doing anything to lobby the state government as well as the Commonwealth government? I know they are putting in \$4 million, but that obviously would not compensate industry for the negative effects of the removal of this aid to their management. Is your organisation lobbying government to set up some sort of compensatory mechanism?

Mr Graham—Yes. I am sorry; I am a bit worried about what I can say on the record. We have been in continual discussion with the federal government and certain other stakeholders and potential providers of goods and services in the community. As soon as we can get this decision made and implemented, there is the capacity to help by getting community support—funds and materials for fencing, shooting or whatever. The goodwill out there is enormous.

Mr MARTIN FERGUSON—Do you accept that there is a major native animal population problem in Tasmania which is a problem to the plantation industry and to agriculture in general?

Mr Graham—It is hugely overstated but there is a problem that occurs from time to time and from place to place. You heard the guy from Forestry Tasmania. I could not have said it better myself. What Dr Wardlaw said was right. In the past the problem has been grossly overstated. There is a problem. It is variable, and from time to time it is severe and something needs to be done. We have been very supportive of something being done. We believe that non-lethal approaches need to be given much more serious support. If you are going to get into lethal

approaches, it is much better to do targeted shooting by professionals than to use untargeted chemicals. The important point to realise is that the use of 1080 in Tasmania is heavily subsidised. If they actually had to do full cost recovery, they would not be using it.

Mr TUCKEY—If they use 10 kilograms, what does it cost—a million dollars a kilo?

Mr Graham—It is the application of it. We have a code of practice which sets norms about how it is used. As the code of practice is currently applied, about a third of the cost of operating to the code is recovered in the cost of dispensing the chemical to land-holders. If the code was properly applied, in our view, probably only 10 per cent of the cost of operating the code would be recovered in payments from land-holders. There is a very, very significant subsidy that makes 1080 more readily useable than would otherwise be the case.

CHAIR—Before I give Patrick the nod to ask a question, I do not think you answered the question asked by Mr Windsor about whether you are in negotiation with the state government. You mentioned the federal government and other interested parties.

Mr Graham—With the federal government, we are in intimate discussions all the time.

CHAIR—You were asked about the federal and state governments.

Mr Graham—With respect to the state government, we have backed off pending seeing the decision with state forests bedded down. We are providing passive support now that that decision has been made. We are still trying to get a consensus in Canberra that the decision will be implemented by the end of this year.

Mr SECKER—I am not clear as to why it is okay to shoot native wildlife, when there are obviously going to be some bad shots and some painful results, and why it is okay for native animals to die from starvation through overpopulation, but it is not okay to minimise the problem of native animals by the use of 1080.

Mr Graham—1080 is a very broad spectrum poison. It is seriously dangerous. It is on the US list of bioterrorism chemicals. That is why—

Mr SECKER—If they use it.

Mr Graham—No, they only use it against coyotes where—

Mr SECKER—No, that is simply not true.

Mr Graham—It is.

Mr SECKER—No, it is not.

Mr Graham—We can talk about it some other time. You only need very small amounts. Ten kilograms goes a long way.

Mr SECKER—So?

Mr Graham—Shooting is target specific; in other words, you only kill what you intend to kill. Between amateurs and professionals, the knockdown rates in places where they have had trials are 90 to 95 per cent with amateurs and 95 to 98 per cent with professionals. It is pretty good. We are not talking about something that you want to go out and do, but if you accept that there is a problem that something has to be done about, it is fairly easy to line up the ones which are better than other ones.

Mr SECKER—Aren't you also against shooting?

Mr Graham—It would be really nice to live in a world where these problems did not exist and we could all hug everything happily. Problems do arise, decisions have to be made, but there are better choices to be made than others. In our view, to target and shoot an animal because it is a pest animal and it is causing a problem is one thing. To purposefully and knowingly kill a bettong that is right next door to that animal by feeding it 1080 when it is not doing any harm to that land-holder and it is a threatened species is unconscionable and should not be allowed.

Mr SECKER—If 1080 is banned, would you then give a commitment to this committee that you will not be out there trying to stop shooting?

Mr Graham—We have given the commitment to the shooters, the farmers and the politicians the whole time. That has been the position for years. It has always been our view that targeted shooting is a far preferable way of dealing with pest-animal situations when they occur.

Mr TUCKEY—If the forest industry was allowed to go back and harvest the entire national forest estate in a managed sense, say, once every 150 years, we would not be talking about this, would we, because we would not have plantations, which was an invention of your industry. I was there. I know all about the 2020 vision. I can take you back through all the headlines. I cannot accept your offer of how you will not start a campaign against shooting, because I have seen all the agreements made in the past. RFAs were inviolate until they were signed, and then they were just another target. What guarantee would your organisation and you personally give to this committee that, after we have gotten rid of 1080, there will never be a time when, as with duck-shooting and everything else, there will be people running up and down in front of the shooters trying to stop them shooting these animals?

Mr Graham—No-one can give that assurance.

Mr TUCKEY—We have agreed on something.

Mr Graham—What I can say is that we have put a consistent position to the stakeholders with a real vested interest in this issue for years, and that remains unchanged. That position is that targeted shooting at pest animals is a far better way of dealing with them if you accept that something has to be done.

CHAIR—Mr Graham, thank you for your contribution.

Resolved:

That this committee authorises the publication of evidence given before it at a public hearing this day.

Committee adjourned at 5.27 p.m.