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# **AGRICULTURE AND ENVIRONMENT COMMITTEE**

## **Members present:**

Mr JP Kelly MP (Chair)  
Mrs J Gilbert MP  
Mr R Katter MP  
Mr JE Madden MP  
Mr LL Millar MP  
Mr PT Weir MP

## **Staff present:**

Mr R Hansen (Committee Secretary)  
Ms S Stephan (Assistant Committee Secretary)

## **PUBLIC HEARING—INQUIRY INTO THE IMPACTS OF INVASIVE PLANTS (WEEDS) AND THEIR CONTROL IN QUEENSLAND**

### **TRANSCRIPT OF PROCEEDINGS**

**WEDNESDAY, 25 OCTOBER 2017**

**Brisbane**

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### **Committee met at 9.45 am**

**CHAIR:** Good morning. I declare open this meeting of the Agriculture and Environment Committee. I would like to start by acknowledging the traditional owners of the land on which we are meeting today. My name is Joe Kelly. I am the member for Greenslopes and the chair of the Agriculture and Environment Committee. With me here today is Mr Pat Weir, the member for Condamine and deputy chair of the committee; Mrs Julieanne Gilbert, the member for Mackay; Mr Jim Madden, the member for Ipswich West; Mr Lachlan Millar, the member for Gregory; and I believe Mr Robbie Katter, the member for Mount Isa, will be joining us later on today.

I remind everyone that these proceedings are similar to parliament and are subject to the Legislative Assembly's standing rules and orders. The proceedings are being recorded by Hansard and broadcast live on the parliament's website. Media may be present and will be subject to my direction at all times. The media rules endorsed by the committee are available from committee staff, if required. All of those present today should note that it is possible that you might be filmed or photographed during the proceedings. I would ask everyone to turn off their mobile phones or switch them to silent. Only the committee and invited witnesses may participate in the proceedings. As parliamentary proceedings, under the standing orders any person may be excluded at my discretion or by the order of the committee. These hearings are to hear evidence from the Department of Agriculture and Fisheries.

**HANNAN-JONES, Mr Martin, Senior Biosecurity Officer, Invasive Plants and Animals, Biosecurity Queensland, Department of Agriculture and Fisheries**

**ROBERTSON, Dr John, General Manager, Invasive Plants and Animals, Biosecurity Queensland, Department of Agriculture and Fisheries.**

**CHAIR:** Thank you very much for your time today and for the written briefs provided to the committee throughout our inquiry and your extensive help at various points during this inquiry.

The purpose of today's hearing is to help us finalise some lines of inquiry in relation to this matter so that we can finalise our report. We appreciate you coming back. We know that you have been before us many times before. It is a lengthy hearing today. We are going to break the hearing into a number of key areas. The first is weeds and their impacts. The second is the coordination of weed strategies. The third is Biosecurity Queensland's weed programs. Then we would like to look at weed control by local governments and weed control on Crown land. As you would be aware, we have conducted three case studies of weeds, so we have a number of questions specifically in relation to each of those.

While members of the committee are certainly welcome to ask questions in any direction in relation to those matters, we will attempt to stick to those key headings in our questioning. We will move to the first area, which is weeds and their impacts. We will skip the introductory statement—unless you particularly want to make one? I am sure that you have done it enough times now. Did you want to ask the first question, Pat?

**Mr WEIR:** Yes, I am happy to do that. The maps that you have on the distribution of those weeds: how old are they and are there updates of those maps?

**Dr Robertson:** Probably the most accurate one is the agricultural pest distribution surveys that we conduct. The last one was in 2013-14. Many years ago they were done on an annual basis. They are probably done on a two- to three-year basis at the moment. We are probably coming up to having the need to do another. The issue with them, of course, is that they are very resource intense. They take every weed and look at the distribution in consultation with local government but also with a group of experts who know the weeds in particular. That could come from a number of areas. That APDS mapping is available to everyone. It is open to everyone to have a look at and they are certainly the most accurate that we have.

We collect things on Pest Central, which is our main spatial database. It is nowhere near as accurate as the APDS mapping but we try to keep that reasonably up to date. It is simply nowhere near as accurate, because the pixel size, or the capture size, is much more broad and cruder than APDS. I think the APDS is something like 17-kilometre grids across the state. It is available. It is still current. Personally, I do not think you need to do it on an annual basis, but you need to do it on a reasonably regular basis.

**CHAIR:** During the course of the inquiry we interacted with a range of councils. Some seem to hold data on weeds in various ways. Do you incorporate that data, or do you access that data into the information that you create and provide?

**Dr Robertson:** When you do that review of the APDS, it certainly would go into that. The issue we have is that different groups—and that includes the NRM groups as well—collect information on different software. We have Pest Central, which we open up and people can use. Some NRM groups and local governments use that. There are other systems that you might have heard of, like Fulcrum and others, where you can record that on your phone and other things and that is captured. We do not have Fulcrum, but we keep pressing that we need to have the ability to share that information, because I think that is the crux—not only statewide but also nationally, where there are a number of different systems. I think that is the essence of making sure that we share it. In some cases we have been successful but not all. We just keep working on trying to do that.

**CHAIR:** I was going to ask about other jurisdictions and how they approach this, both within Australia and internationally. Are there jurisdictions out there that you think get the mapping particularly right?

**Dr Robertson:** I think everyone struggles with it. Last week in Armidale I gave a talk at the New South Wales weeds conference. There was a talk there about them going around local government and collecting all the information that we have and trying to put it into one spot, which was a huge exercise, because you had to make sure that the data was right before you put it in.

They have a slight lever there, where they give money out to local government and local land services as a grant for their weed control. One of the requirements of that is to make sure that they provide that information. While we do that on particular initiatives in some things, like the Queensland Feral Pest Initiative, there is no general requirement of that now.

**Mrs GILBERT:** It is great that you have the maps that people can look at to see where the pests and weeds are. Do the landholders and different agencies rely on the maps or do you put out regular updates on where the infestations are?

**Dr Robertson:** We would do updates if we have an eradication program, for example. For established weeds and pests we do not necessarily give updates or distributions. We do it through Pest Central, where we try to capture that. As I say, it is fairly crude. They are big catchment areas. Again, your most accurate is that mapping and you have a look at that every few years. It would be a huge exercise if you were going to do it for every species. You need a dedicated approach to it and you would do it only every few years, because things might not change that quickly.

**Mrs GILBERT:** With the mapping being updated every few years, is there a possibility that there would be an outbreak in between when that mapping is done where you need more resources, or more updates so that you can get on top of it?

**Dr Robertson:** There certainly may well be, but if there is an eradication target—we have a number of eradication targets throughout the state now—that certainly has day-to-day management or mapping, because the teams rely on that to understand where they have been. They will use GPS tracking and everything else to understand where they have been and where the distribution of the weed is. We also need it for reporting back to both the state and our national cost-share partners. We do that for tropical weeds, for example red witchweed.

There are other species where we would make sure that our staff—if they are plus-1s, as we used to call them, the restricted and some of the prohibited ones that we are trying to really contain—would use Pest Central. If we picked up another cactus, for example—one that we had been trying to get rid of—we would map that and put that on Pest Central.

**CHAIR:** Would you say that the councils—and I know that is a very broad group—have a good understanding of how to access and utilise this mapping data that is available?

**Dr Robertson:** Generally, it probably could improve. I would probably struggle to answer that question, because some do. Again, some have their own systems so they do not rely on that. I would say that it would be variable.

**CHAIR:** Do you think there should be some standardised system across the state and across the nation?

**Dr Robertson:** I think the APDS is probably the standard system.

**Mr WEIR:** What is your estimation of what it costs the state for weeds? Is that an impact on loss of production? Is it the cost of control? How do you arrive at your figures?

**Dr Robertson:** Of the costs of weeds?

**Mr WEIR:** What it costs the economy.

**Dr Robertson:** Most of it is based on agricultural production, or the costs that people incur as part of the farm budget. The big question would be what government spends on it, how much of a local government's budget is spent on weeds, and then there would be an estimate of what it costs for particular industries as a part of their farm budgets to put towards weeds. In 2009 in Queensland the estimate of the cost of weeds was \$600 million or something.

There have been a number of industry calculations of what weeds cost them through growing crops and grazing. They would have their separate things. Some of those are national, because some of the industries are not divided up on state borders; they are divided up into regions. Southern Queensland and northern New South Wales are very often considered one region for some industries.

We are going through a process now with LGAQ to capture what state government spends on weeds, what local government spends on weeds and what NRM groups spend on weeds. We are doing that process right at the moment. Hopefully we can get an update of that 2009 figure of \$600 million.

**CHAIR:** Welcome, member for Mount Isa. Just so you understand, we are breaking the hearing into various headings. We are currently looking at the heading 'Weeds and their impacts in Queensland'. There being no more questions from committee members on this heading, we will move onto the next area. We will now move onto the coordination of strategies and programs.

In all of our visits and inspections this was an issue that was looked into deeply. There are some questions that we wanted to go through today. I want to start with Weeds of National Significance. The evaluation of the previous national weeds strategy notes its failure to translate talk into action in relation to weed management. The committee notes from the evaluation report that many who participated in the evaluation felt there was a lack of connection between your strategy and on-the-ground weed management. Were any annual work plans published under the previous national strategy or the Queensland strategy? In the absence of work plans, how do national or state strategies translate to on-the-ground activities?

**Dr Robertson:** The Queensland weed strategy, as it was—now we are putting it together with the animal strategy—would give the oversight in terms of how we look at weeds or how we deal with weeds within Queensland. That would hopefully give direction to the biosecurity plans at the local government or regional level. They can actually take direction from that and even put in other things that may be more of a priority within their own area and then apply that action there.

We have a range of different things to consider. We have the things we are trying to prevent through to the things that are already here. There are different actions within that strategy in terms of how you attack that. Who really takes the lead on particular things? We see government very much in that prevention space and eradication space. We would work together with local government in the established species areas. That is the approach we would take. I am not sure that answers your question fully.

**Mrs GILBERT:** How has the coordination between the Commonwealth government's and the Queensland government's policies, programs and officials been improved? Has there been an improvement there? That seemed to be a bit of an issue when we were out Jim's way.

**Dr Robertson:** The way it works is that there is a national committee—the Invasive Plants and Animals Committee. There used to be the Australian Weeds Committee, but that was amalgamated with the Australian Vertebrate Pests Committee. We now have the Invasive Plants and Animals Committee. That achieves consistency between the national policy and state policy. They develop priority lists for the country and each state contributes to that. That is largely in the prevention space. They did work through the framework for established pests and diseases which talks very much about how we deal with established weeds. It gives the overlying frameworks for that.

In those committees you also have the Commonwealth talking about particular initiatives that are coming through and the ability to apply for those. The Invasive Animals CRC, for example, and others that can give advice on research priorities or get advice on research priorities and have the ability to facilitate some action on some of those things sit on that committee.

In general, I think it works reasonably well—that is, the interaction between the state and the Commonwealth. It is really the level of weed management that you are talking about. If it is really down to the on-ground things, I think that is probably not necessarily the forum, although if there are really pertinent issues they can come through to that committee.

**Mrs GILBERT:** In terms of the on-ground level, does there need to be a better relationship between the councils and the state and Commonwealth?

**Dr Robertson:** There certainly can be. I think there are avenues for that now. We could maybe tighten up the relationship between state and local government. I think we are getting there anyway. There is always room to hopefully improve that. We have initiatives, such as the co-investment model, where we talk closely about priorities. We have done a lot of regional prioritisation under that, saying 'What are your priority weeds and pests?'

We send the strategy out for consultation so local government has the ability to contribute. We work together with them where we can on their biosecurity plans. We capture R&D priorities to make sure they go into the priority list for research, both statewide and nationally. We have received Commonwealth funds for particular species that are really important at the local level.

**Mr WEIR:** The Weeds of National Significance plans finish at the end of this year; is that correct? How do you see that void being filled, or where do you see the future with that?

**Dr Robertson:** That is a good question. In terms of the Weeds of National Significance national plans, with the discontinuation of funding in 2012—the funding had really been around the coordinator associated with each of those plans and who developed those plans—it has been put on the states to keep following those plans.

It is very difficult without having someone on those particular WoNS plans to make sure those strategies are followed. I think we are generally. In terms of a lot of the original WoNS—there are 20 of them—a lot of the actions have been achieved already. It does not mean that we have eradicated them; it is really about methods that have been gone through to keep them contained or keep them managed or things are happening. I cannot say it for all of them, but many of them have. Twelve new WoNS have been put on recently.

At the national level we have been looking to determine what you do with those original 20 WoNS when there is not a great deal of national reporting on them because the resources are not there to know exactly what is happening across the jurisdictions. A lot of community groups often do work on those particular species that is hard to capture. The species range from blackberry to lantana.

It is a good question, but I suspect the review is happening at the national level about what some of those species of WoNS go to and whether some should remain WoNS. WoNS had a particular purpose—that is, to make sure we got action around them. A lot of that action has occurred. For some it has not been that successful and for others it has been quite successful.

**Mr MILLAR:** This is a passion of mine. I am sure it is a passion for Robbie and Pat and the others on the committee. What are the criteria to categorise a weed of national significance? What are some of the steps you take?

**Dr Robertson:** It has to meet the national criteria for national significance.

**Mr MILLAR:** What is that criteria?

**Dr Robertson:** It is a concern for the nation as a whole. It is highly invasive and established and there is no ability or tools for landholders or councils or government to go and do something about them.

**Mr MILLAR:** Where does prickly acacia sit?

**Dr Robertson:** Prickly acacia is a WoNS, along with a couple of the other prickly bushes. We are going through the process at the national level of reviewing those. Prickly acacia is a really interesting one. Probably the tools are there to do something about it, but the scale of the infestation is so big that it is pretty easy to get away. It may well remain as a WoNS because of the distribution that occurs or through movement of cattle or other things like that. There is no control on that at the moment.

**Mr MILLAR:** I am just trying to present a case. It is a WoNS, but it is regarded by the state government as under management, not eradication. Given that it is a WoNS, why are we not looking at eradication?

**Dr Robertson:** Not all WoNS are eradication targets. In fact, most of them are not because they are too big. They are of national significance but they are too big. If it is an eradication, usually it is here—

**Mr MILLAR:** Like red witchweed?

**Dr Robertson:** Yes, it is still feasible to eradicate. The national approach to prickly acacia is that at the moment it is not nationally able to be eradicated. Regionally it might be able to be eradicated. This is where we would encourage everyone to regionally eradicate it. We would support that entirely, which we are doing in Central Queensland.

**Mr MILLAR:** My concern is that, because we have moved to management, sometimes it is hard to convince people to try to eradicate it regionally if we are not eradicating it statewide. That is the issue you face.

**Dr Robertson:** I do not know that it ever was an eradication target. In the early days it was being promoted. I do not think it ever had that label. Now if we can strategically regionally eradicate it, yes. It was never an eradication target, as far as I am aware.

**Mr Hannan-Jones:** When the original WoNS program was devised, all the original targets were considered to be intractable problems. That was about giving management options to landholders or whatever groups were having to reduce the impact of those particular WoNS species. A number of those species had containment lines where it was recommended that work outside the containment line or eradication may be feasible and that within the containment line it was impact reduction.

**Mr MILLAR:** We were looking at funding for local government. For natural resource management groups such as Desert Channels and Southern Gulf NRM, are we seeing any increase in funding or a decrease in funding?

**Dr Robertson:** Their state level funding is under DNRM so I cannot comment on that. Certainly under the Feral Pest Initiative we have given Desert Channels, South-West NRM and Southern Gulf NRM a considerable amount of money to continue their program in terms of prickly acacia.

**Mr MILLAR:** Do you have a number there?

**Dr Robertson:** Desert Channels was recently successful in getting \$1 million for prickly acacia. South-West NRM got—I would have to check this—a couple of hundred thousand dollars. Desert Channels received, as part of the Queensland Feral Pest Initiative, in combination with McKinlay and Flinders, just over \$1 million for prickly acacia. That was probably two years before.

**CHAIR:** I am interested in the coordination between the Commonwealth and the Queensland government. How could coordination between our policies, programs and officials be improved?

**Dr Robertson:** There is reasonably good coordination between them. It is really about getting it from nationally significant issues right through to what occurs on the ground. Prickly acacia is a beauty where you can say that that should come up as a national issue. It comes up on the national agenda. We have biocontrol money to try to look at biocontrol agents, which is national funding. I always think that with some of those bigger programs, where you have a highly invasive species over a huge area, you have to do it at a local, state and national level to see if you can get a larger program up. I think we have talked through that through the inquiry as well.

**CHAIR:** You just put some figures around funding to various organisations, groups and councils. How is the funding linked to the weeds strategy and how do you monitor progress in relation to that?

**Dr Robertson:** The funding is not linked to the weed strategy as such. The state weed strategy is a strategy. While we might prioritise funding towards particular priorities that would appear under that strategy, we do not have dedicated funding to implement the strategy, as I think you are saying. The funds are there. It is really about making sure that the direction document allows that through a number of different initiatives, such as what we are doing with local government and such as appear in biosecurity plans, so these things that we state are priorities are also priorities at the local level, so that we can direct the joint funding that we already have. It is the adjustment of funding towards weeds that we have rather than moneys associated with a strategy.

**Mr KATTER:** This is not really a direct or specific question. I will leave it open for you to respond to. Lachie and I see, with the regional councils, that there is such a scatter-gun approach and a real lack of coordination. You talk about the Commonwealth and state levels in terms of funding. There are solutions out there. There was an attempt by one of the councils in the south central west to pull everyone together but that pretty much fell apart, which was very disappointing. There are some good

people and good councils trying to do things. The Southern Gulf and Desert Channels will try to do something, but coordination is really lacking. Lachie and I are a bit responsible there, too. It is hard pulling everything together. I am sure there are a few things we can all agree on, to try to start that process. Where do you see your role in that? There needs to be someone from here who is pretty focused, not to force things on people but to bring up ideas and coordinate it. Everyone is going their own way and they think they have the best way to do it. There is not too much at the high level, but at the low level there is a real absence of working together and coordination.

**Dr Robertson:** Let us use prickly acacia, because that is the most topical at the moment. We have been working closely with Desert Channels to try create a plan for the Lake Eyre catchment. You need a plan and a proposal. We have been working with Southern Gulf as well, to try to get that up. With some of the work that is going on, I thought we might get there. We have had a couple of meetings, but I cannot tell you the latest because I have not been in touch with it lately. We need to get that up. I agree: that is what is going to make it.

We had a funded program—it is soon coming to an end—called the War on Western Weeds, which has worked really well. Desert Channels is doing something. There is much better integration than there was a couple of years ago. Muttaborra is just one example where they are working closely together. That was always the integration where they work differently and their priorities are slightly different but they are complementary. It is how you work together to do that.

I think we are getting there, but it is such a big problem. It is such a big area, too. You have to come together in a plan. We were talking about that only a few months ago. I still think—and I think Leanne Kohler would agree—you will only have success when you get landholders on board and feeling like they are a part of it. If you do not, it will be the same as we had 20 years ago in some of the SWEEP programs, where a lot of money will be spent and probably, after a while, the momentum will fall away, because everyone needs to see their part in it. That is my personal opinion.

**Mr MILLAR:** One of the issues you are facing is that you have that imaginary line of prickly acacia, which is at about Muttaborra, Aramac, Barcaldine—where we were—through to Winton. Anywhere lower than that, it is not a high priority at the moment because it is not there. There are shoots of prickly acacia somewhere. We have found prickly acacia right on the bottom of the Diamantina. There is an old adage in agriculture that until it is a problem it is not a problem. Prevention is not as easily forced upon people to try to solve this problem; do you agree with that?

**Dr Robertson:** In some ways. We get prickly acacia down at Willowbank, which we jump on really quickly because a lot of cattle come down there. Prickly acacia pops up every now and again, and we jump on it. I think it goes back to the scale where people have tried in the past and it is almost too hard now, because mentally it is too hard. Again, as I think DCQ has shown and certainly we have shown in the good neighbour policy that has been running up at Flinders, people just need a little bit of help. We have seen a lot of innovation occur amongst landholders with scatter guns and everything else. I think it is about everyone feeling a bit more empowered to do it. They have to be part of that discussion or part of that plan.

**CHAIR:** Effectively, you have this draft Queensland weed and pest animal strategy. Is that finalised?

**Dr Robertson:** We have a Queensland Invasive Plants and Animals Committee that has all the relevant groups on there. That meeting is in the last week of November, I think.

**CHAIR:** Below that, should we have regional biosecurity plans and local government biosecurity plans?

**Dr Robertson:** There are. Under the previous legislation, the local governments always had pest and weed plans. Now we have gone over to the act, they need to have biosecurity plans. Most of them do or are in transition. They had a plan that was going to expire in 2017 or whatever. They have just transitioned from the old to the new legislation. We are still encouraging some to make sure they get their plan up and running. We are in that process. There are still a number outstanding, but many are in progress.

**CHAIR:** How do you monitor those plans and check for effectiveness?

**Dr Robertson:** Our biosecurity officers work with local governments to see how they are going. Most local governments include all the major stakeholders within their region to develop the plan. It is not just something they do internally. There are checks and balances. They would meet regularly around that plan, in many cases, with the people who develop it. Those checks and balances are occurring there. I see there is no real big legislative thing to check on that plan and make sure you have achieved everything in that plan.

**CHAIR:** As there are no further questions in relation to this matter, we will now move on to Biosecurity Queensland's weed program. Can you provide breakdowns for the annual funding and staffing allocated by the department to weed programs for the past 10 financial years?

**Dr Robertson:** I would have to take that on notice. It is sometimes hard to distinguish it. Certainly it is easy for research priorities. Our biosecurity officers do a range of things. They will do pest animals, as well as training, as well as weeds. Of course, there is other funding that would have occurred for particular projects. The War on Western Weeds is one and there are some others under the Feral Pest Initiative. I would have to really pull that together.

**CHAIR:** Given that the weed programs, including research into biological control, might take many years to complete and that weed control programs that end prematurely could make infestations worse, how does the department ensure that weed programs get the sustainable long-term outcomes or funding that they need?

**Dr Robertson:** We get an allocation from government. We try to prioritise that, as best we can, on what the issues are. A lot of that is around interacting or working in partnership with our key partners in industry and particularly local government. We would allocate a certain amount of money from the base funding that, together with local government preset payments, come together to form the moneys that would go towards weed and pest animal research and other things for the state. That is always a certain amount that we honour every time. As I say, our officers are spread regionally. There are R&D people as well. We would support them and make sure that they are maintained, because it is really important to have that presence, of course.

**CHAIR:** Do you work with industry much around R&D? Is there much contribution from industry players in terms of complementing each other in what you are doing?

**Dr Robertson:** We certainly involve AgForce in our research review of the research projects we have. Some of our research comes through MLA. The industry would contribute to some of that funding already through the levy system. Yes, we interact on quite a regular basis. For example, on the Feral Pest Initiative, we have AgForce and the Queensland Farmers' Federation on the oversight group to determine where that allocation of funding should go. That is not only pest animals but also weeds. We try to interact. We see it as important to try to bring them in on that decision-making as much as we can.

**CHAIR:** I am a nurse by profession and I have thought a lot about public health over the years. As I have gone through this inquiry, it seems that there are a lot of very similar activities and issues in relation to this matter. One of the things that I think about particularly is education. We have heard a lot, particularly in areas around Gatton and even to a certain extent Gladstone—wherever there are growing urban populations—about the impacts of people tree-changing. Has the department considered the costs and benefits of providing more weed education for landholders generally, but specifically to those tree-changing folks?

**Dr Robertson:** Certainly. We have a massive amount of information and most of it is provided in a number of different ways. Our website has all the fact sheets on it. There are a massive number of fact sheets that people can access at any time if they have a concern. We also work closely with local government to make sure that they have the resources to provide to groups, because they are the main ones interacting with landholders. We make sure that they have it. If it is part of an eradication program, for example, we use all those methods, as well as social media, to target particular things. Through our communications to local media and social media, we target particular nasty things that might occur through the state, so we raise awareness that way. I think we do a reasonably good job at getting that awareness going. It does not mean that it gets penetration to everyone, but if we see something that needs to improve, yes, we will take that on.

**CHAIR:** So you are integrating social media into what you do?

**Dr Robertson:** Yes, quite a bit.

**CHAIR:** Is that proving effective?

**Dr Robertson:** Yes, it has proven to be really good. You only have to look at the eradication responses that we have had in Cairns, where we are looking at five different species, in terms of social media, particularly for one species which came in as attractive collectors item. It is in people's backyards or backyard ponds from Port Douglas to Mission Beach. It is a really invasive species—Limnorcharis. We have done all the tracings of everything that we know. We have it right down to low levels, but every now and again one pops up. That is only because someone has noticed it on social media or seen the specimen at their local show. That is the way we find out about the odd one now and again. It has been really effective and we use it a lot.



**CHAIR:** Can people take photos of their weeds and send them to you?

**Dr Robertson:** Yes, that occurs. That technology is the way it is going. We do that a lot with weed species. Martin is probably the one who ends up seeing the photograph. We do it with pest animals as well.

**Mr WEIR:** You said there is investment by other organisations as well into biological research. Does the government have a standard set model or guaranteed funding for research into biological control?

**Dr Robertson:** We maintain the funding of our officers who do that biological control. They may be a particular species. There is a fair number of biological control targets—at least a dozen. Probably for more than half of those we would provide the funds to support the officers to do that. Land protection funds would do that as well. It is quite an expensive process because often to find the agents you have to go overseas to the origin of the weed to see if there is an agent that will combat it. As you would probably appreciate, the quarantine process to bring it in and see whether it is successful and to see that it does not jump across to any other native species is a big thing. That is why it takes so long. We maintain that funding.

The money that we received not so long ago for prickly acacia and giant rat's tail, for example, was from a funding program under the agriculture white paper which came through the Rural Industries Research and Development Corporation. We receive money for that for our biocontrol people to help them with finding extra agents. We are already doing it but it is a boost that allows you to do more. That is a process that is done.

Usually MLA, for example, will have a priority list that they would like to see biological control on. That goes into the mix of priorities as well. There is stable funding for biocontrol. If you get extra funding like we did through the Commonwealth, it allows you to jump that much further. Most of our biocontrol work is done at the Boggo Road facilities. There are quarantine facilities there to make sure that anything does not fly off. They are really strict. It is a very expensive process. Then if we find an agent that we are releasing it is a matter of growing it out so you have the numbers to release. We will do that here and also at Charters Towers. For a number of those agents that might occur for a whole range of things, we then would develop further and make sure that we have the numbers to spread around.

**CHAIR:** Does the tertiary education sector have much going on in the area of weed control research? Is that something that the university sector is involved in?

**Dr Robertson:** Not a great deal—not that I am aware anyway.

**Mr Hannan-Jones:** Professor Steve Adkins at the Gatton campus of the University of Queensland has been doing some work on parthenium weed over the years and more recently on weed spread issues such as vehicle spread of weeds. The new Centre for Invasive Species Solutions is proposing to have a weed stream as well as the animal stream of research.

**CHAIR:** That is at Gatton as well, is it?

**Mr Hannan-Jones:** No. That is a national CRC in which our department is a participant.

**Dr Robertson:** There are some individuals—and Gatton is one that stands out. I am at a bit of a loss to think of others that are doing a lot in that space.

**CHAIR:** We might move on to weed control and management by local government. That was certainly an area about which there was good interest during our various visits and inspections. One of the issues that came up was a reluctance by councils to enforce weed control laws under the new Biosecurity Act. I would not say that there was a recalcitrance but it was a political reality that going out there and pinging constituents directly for those things was a council career-ending manoeuvre. Has the department considered ways that we might be able to assist councils to enforce weed control laws?

**Dr Robertson:** This is an issue for sure. It has been an issue even under the previous act as well, I think, for that reason—the idea that you are going to be defriending someone in your local town because you have this role of enforcement. In the case of wild dogs we did a trial to educate local governments to show that it is not about taking your next-door neighbour to court; it is really about having a discussion and educating people to take measures. We found with that approach that the large majority voluntarily comply. In some ways it is a lack of awareness or not even knowing it is there or thinking it is all too hard, but people do comply.

We have done training as part of the Biosecurity Act in that whole area around compliance. We will continue to do that with local government to show that it is not onerous because it is about just having a chat in the first place. It is about asking people to do things or making people aware. That

does not necessarily get around the problem, though. In some smaller communities it is a really hard issue. It is certainly on my agenda to work out a way that we can make it work better. I do not have any quick ideas about that because it is a complex issue. It is about how state and local government can work better together to make sure we get some compliance around that. There is a fear that you are going to put people off or you are going to lose your job.

**CHAIR:** It would be compounded, I imagine, particularly with weeds where there are differing views or no settled science on the best way to manage or limit or eradicate weeds. When it came to the case study around prickly acacia, you had various submitters and witnesses proffering opinions that it was not a problem, that it was good fodder—

**Dr Robertson:** Prickly acacia is a very hard one. Some local governments do compliance really well. If they have an issue, they have embraced it and realised what it is. Others do not do it well for those fears that it is going to have a backlash.

**CHAIR:** Would that be like the Good Neighbour Program?

**Dr Robertson:** The Good Neighbour Program is a classic example where you meet your biosecurity obligation. That would be good. Where it has been done, we are seeing that not only are your boundaries clean but it incentivises people to push back from their boundary and start clearing their own property.

**CHAIR:** Has DAF considered ways to get more local governments to participate in those sorts of programs? Has there been any resistance where you have attempted to encourage that?

**Dr Robertson:** No, I do not think so. Again, it is probably based on the weed. Prickly acacia is a beauty, because it is so visual and has impacted so much. If you are talking about another weed with impact—sure, that must definitely be in the mix of a management approach. If you are talking about generally multiple weeds, I am not sure whether it would be that effective.

**Mr MILLAR:** Do you think we are being a bit hard on local governments given that their primary objective is roads, rates and rubbish? Yes, they do have local laws officers— I understand that—but why are we asking them to participate in the policing of weeds when weed control is really centred at both the state and federal government?

**Dr Robertson:** Why do you say it is centred at the state and federal government?

**Mr MILLAR:** If you go back to what a local government does, their primary purpose is roads, rates and rubbish. They have very little funding. Certainly for councils out our way their rate base is almost nothing. Local governments are about roads, rates and rubbish, yet we have Biosecurity—and the federal government is involved in weed control as well. Why are we expecting local governments to send out local laws officers to police people to control their weeds when the onus should probably be more on us as a state government or the federal government?

**Dr Robertson:** That is worthy of further discussion, I think. They have the regional lands officers under local government who are doing that role. Where we have done it for wild dogs, they can do it well. It does not necessarily create a great hardship on those particular officers in the sense that it is not beyond them, by any means. I acknowledge that resourcing is an issue, but it is not beyond them to be able to do that, given they are shown how to do it. It does not dismiss where there are some local governments that do not have a large rate base and what do they do about that. I think there is a conversation that needs to be had between state and local government to understand how you operate within that. I come back again to the fact that some local governments are doing it really well. I am not sure about their rate base, but they are not city based local governments either. Some are regional local governments. It is really about the approach to it. I acknowledge that there probably needs to be a greater conversation around that.

**Mr MILLAR:** Just to add to that, you can look at the department of agriculture and departmental officers. There is probably more of an obligation on the state government to play a more active role in assisting and providing that guidance for landholders to control their weeds.

**Dr Robertson:** I think we are doing that now.

**Mr MILLAR:** Where does the state government go out to a landholder and say, 'We need to clean this up. This is encroaching on the neighbours. It is encroaching on a waterway. It is encroaching down the Cooper'? Where is an example of that?

**Dr Robertson:** We would do that together—I cannot think of an example straightaway—with local government if there was a particular issue that was becoming quite an issue. I think we have done that. We are working with Navua sedge, for example. That is an example in the Tablelands where we are trying to get something happening there. We would generally do that with local

government for a whole range of different species. When you are talking about really established pests or weeds, it is usually the local government that has the powers to do that. We certainly do not have the resources to go and do that for every established pest or weed. The answer is that I think we do that on a whole number of occasions. We definitely do that when you get all those class 1 weeds—or what used to be class 1 weeds. We do that now and we work together in terms of pests and weeds. With the larger established species, it would be extremely difficult for us to do that because we do not have a large number of people spread around the state.

**Mr MILLAR:** I come from Western Queensland with those smaller councils. If you look at Boulia, Barcoo and those councils, their main job is to grade roads and keep infrastructure up to date. I think there needs to be a more inclusive arrangement between state and local governments in—I hate using this word—the policing and enforcement of weed control.

**Dr Robertson:** I think it is worth mentioning that we have just given \$1.9 million to put six additional local government officers in many of those areas to do property planning to help with some of those compliance issues. You raise the capability of the landholder himself but also you assist the local government. They are pretty much in place now—

**Mr MILLAR:** That is good.

**Dr Robertson:**—in those councils you mentioned for that reason, because it assists them.

**Mr KATTER:** There is a comment that 'DAF is currently working on introducing penalty infringement notices'. That concerns me a little, because my view is that the answer is to incentivise people who are spending—in the case of prickly acacia, you might say a conservative estimate is \$50,000 to \$100,000—their own money. Some of them are not big businesses and it is a big price for them to pay. Seventy per cent of Queensland—probably 80 or 90 per cent in the north-west, where I am—is leasehold land, where they might pay \$20,000 or \$30,000 a year on land rents. I am just throwing some figures out here, but if they were offered a 50 per cent discount, the government would still be way ahead. You could argue that the government should be paying to fix up this mess because they incentivised all this prickly acacia 50 or 60 years ago, so they played a role in creating it. I think we all acknowledge that government has to play a role in funding and trying to help. You have people who are spending \$15,000 a year, and maybe there should be some incentive with land rent or even through rates, which people complain about anyway. You mentioned empowering those people who are doing the right thing. Do you see any benefit or value in those sorts of initiatives?

**Dr Robertson:** Most certainly. There are some local governments doing that now with wild dog control, looking at trialling different ways of doing it. Incentivising is the best, without a doubt. As I say, most people would probably come on board, but you always get someone who does not and that does not help the neighbour who is trying his hardest. I think infringement notices have a place, but they should not be the tool that you run things by. That was the approach to the War on Western Weeds, trying to deal with people and help them out so they actually see it. DCQ is the same: they will help them for a year and then they have to chip in for the next year. Those approaches go because it builds confidence and things to do something.

**CHAIR:** It would seem to me that one of the incentives to act on weeds is the economic imperative that if you do not then your asset is going to be diminished or your capacity to get a return is impacted. Do you think landholders generally think about weeds in those terms? 'If I do not act on this weed, what is the cost not acting on that weed? What are the real financial impacts on my asset and my business?'

**Dr Robertson:** I think so, but not generally. When we were out for one of those visits we saw a property where the cost of clearing the prickly acacia was more than the price they would get for the property. I think it is a real concern that it is so far gone that no-one is going to go in there and do it because it is just not worth it. While many have probably got that—probably the better producers and the ones still in action do think that way—I suspect there are others who might not or, for whatever reason, are not capable; they just do not have the resources to do so anymore. I think that is where the incentives really kick in, because it is just beyond them or mentally they cannot face it. They have tried, they have kept going for years and years and, without the knowledge of how it spreads and why, they could never work out what was going on.

**Mrs GILBERT:** I want to refer to the Biosecurity Act, which states that all local governments must have biosecurity plans. To your knowledge, do all local governments have their biosecurity pest management plans available for inspection by the community?

**Dr Robertson:** We did a census recently about where people are at, and I think only 29 out of 77 have biosecurity plans. There is a large number whose weed and pest animal plan would have come up for renewal now, so while the act was coming in they kept with that older plan and they will bring it over to a biosecurity plan.

**Mrs GILBERT:** Would their old plans meet the requirements under the Biosecurity Act?

**Dr Robertson:** Given the transition period to the new act, there are some local governments that do not have their plans in place. That might be a mixture of not seeing it as a priority at the moment and not having the resources to do that. Some of the larger councils will struggle to do that plan, either through the resources they have or the expertise they have. Where they want help, our biosecurity officers certainly help them.

**Mrs GILBERT:** Do you have any policies in place to help local governments? We have heard from other members down the other end of the table about small councils with large landholdings. Do you encourage councils to work together to share their resources with training and get their plans together?

**Dr Robertson:** Biosecurity officers certainly give assistance where they can. As part of some of the initiatives we are working with local government to allow local councils to come together and form a regional plan, like RAPAD now have a regional biosecurity plan. Under the current investment model we are doing with LGAQ and local government, we work out regional priorities. There is regional decision-making on the allocation of funds and priorities which align with statewide priorities as well. I think hopefully we get over a lot of that where some smaller councils are struggling but their issues are the same as the adjoining councils'. If they had a regional approach it would be a lot easier for them. I think we are evolving that way.

**CHAIR:** We will move on to weed control on Crown land. One of the issues identified by landholders was the challenge of working out which state government department might be responsible for managing which bit of land and communicating effectively with the right people. That even came from councils. At times there are pieces of land that are obviously owned by various bits of state government, be it Education, Health or Corrections, and they had challenges there. Would there be some value in terms of establishing a central point of contact for landholders to communicate with government about who is managing what land and what they are doing on it?

**Dr Robertson:** Yes, we have heard that confusion quite a bit. There may well be, I would say. I wonder whether some departments have some knowledge under their own acts about who the holder or the owner of the land might be, such as Natural Resources and Mines. They actually understand who owns which lot of land. They might not like me saying that, but maybe that is a central point of contact because at least they can look it up on their database to understand who it is.

**CHAIR:** That would help with state government land, but should there be consideration given to land owned by the federal government as well? I imagine there would be quite a bit of land in Queensland that is owned by federal government departments, particularly Defence.

**Dr Robertson:** I guess so, yes. I am not sure who the central point of contact would be for that. Maybe that is the same again.

**CHAIR:** Even in my electorate there are schools that own land. To all intents and purposes everybody thinks the land is not part of the school because it is not developed, but it is there being held for potential future use and there can be issues on that land. Does the department consider whether or not other departments should report regularly or have some sort of a mechanism to be held accountable for what is happening on their land? I presume it is already accountable under the Biosecurity Act.

**Dr Robertson:** We have most of those Queensland state owned or controlled lands under the state land pests committee. We met only a few weeks ago. That is about making sure that we get consistency across those organisations as to how they do their pest animal and weed control. The priorities they apply to their pest animal and weed programs are their responsibility. We have pretty much all state owners on that. We have local government on that and we have an industry sitting on that as well to provide input. We did invite the education department, because they are a holder. We have Commonwealth Defence on that as well, so there is a lot of interaction that does occur on particular issues around the state. Every time they prepare a report, and we put some of them up under the framework we developed. We do a summary report each year to say how things are going. It is almost a report card, if you like. We try to get consistency there. Again, it is down to each department or each owner, given their funding, as to where they place their priorities.

**Mr WEIR:** Are you indicating that that would be a good contact between—

**Dr Robertson:** We did see confusion about who owns what and who has knowledge of who the true owner is—and ownership changes. I think it is probably a good idea.

**Mr WEIR:** The land pest and management committee would be—

**Dr Robertson:** The central point? No, because that is just a committee that talks about policy more than action being taken. From what I understand, you need someone who is able to tell you who owns that piece of land so then the landholder, the local government or whatever can then talk to whoever it is.

**CHAIR:** Give you a phone number and a name.

**Dr Robertson:** That is right. The committee does not have access to any of that. I think the Department of Natural Resources and Mines is probably best placed to give you that information because they—

**CHAIR:** They hold the titles.

**Mr WEIR:** Is there anything different under the Biosecurity Act that is separate or different to state owned land?

**Dr Robertson:** No, there is a general biosecurity obligation that they need to do that within reasonable measures. It is the same that applies.

**Mr KATTER:** You touched on this when I came in earlier, but I have two questions that are important to me. In the case of prickly acacia, you can do some calculations on the loss of productivity and the cost to the economy. I remember at a forum years ago DCQ was doing some good work with mapping. They were encouraging people that, if they have a little outbreak of prickly acacia, they could tap that in. Can you explain what you are doing in that space? Secondly, has anything been quantified on the cost to the economy because of the loss of production?

**Dr Robertson:** I will go back to the mapping. The agricultural pest distribution surveys are done every few years. The last one was in 2013-14. That is the most accurate you have because, as I said, it is a 17-kilometre grid size. We have others, but they are much coarser. This is where the value lies in what I think you are getting at, because you need to get down to that level to know the size of the infestation. In some areas you have five trees every square metre and in others you have one tree every half a kilometre. Do you call them the same just because of their presence or absence? The surveys are the thing. They are very intense. They require that accurate information. They require experts giving their opinion on where they think the distribution is. That is why I think they are probably better off being done every few years rather than trying to do them any more often, because it is too intense. With the information that you are getting out of it, you probably only want it on a couple-of-years basis; you do not need it every year. The stuff that DCQ would put up or collect—if they are still collecting that—would go into there at their request. What was the second question?

**Mr KATTER:** The cost.

**Dr Robertson:** That estimate in 2009 was \$600 million. We are working with local government through the LGAQ to get a much better idea of the cost. That is expenditure more than—

**Mr KATTER:** No, sorry, I meant the cost to the economy. With prickly acacia, if they say 50 per cent canopy cover and you have zero per cent Mitchell grass, you should be able to apply that to loss of cattle, fattening production and multiply that out to get some sort of number.

**Dr Robertson:** No, at the moment, if we did a prickly acacia one you would probably have to look at a big map, have a rough idea of the density and then do those gross calculations to estimate some cost.

**Mr KATTER:** Would you be the organisation to coordinate that?

**Dr Robertson:** We may well be. We would want to work with industry, though, because a lot of industries do those sorts of calculations for other weeds that affect their industry.

**Mr KATTER:** You have no initiatives in that respect?

**Dr Robertson:** No, we have not done any.

**Mr KATTER:** They would have to come to you to help?

**Dr Robertson:** That is right. That is a level of accuracy that is often required. As you may well know, it is not as though you want to know down to two decimal places; you want to know in the tens of millions where it is. It is often a desktop study that is done, anyway, rather than going out and collecting all of this information. If you need it for a distinct distribution of things, yes, you need to do that.

**Mr KATTER:** A big issue with transport is, again, prickly acacia. Have you made any recommendations in that respect?

**Dr Robertson:** No. We did a couple of years ago go to see if we could get it on the national vendor declarations—prickly acacia. It was unsuccessful.

**Mr KATTER:** Who makes that decision?

**Dr Robertson:** As I understand, MLA makes that decision, because that is where that responsibility lies. Again, it is a matter of working with the industry. We have done the research to show what you need to do. We have a policy that says what you need to do, but it is all about quarantining, of course, before you move cattle and when you get them as well. That is a whole practice change. You cannot enforce anything, because it is too big an issue over such a big area. I think it is an industry practice change that we need.

**Mr KATTER:** Yes, definitely. You probably would know but, for the purpose of *Hansard*, one of the common complaints you get is that people spend 100 grand a year, they get a load of cattle in that has not been spelled for 10 days to get all the seed out and then they are back to square one. With the next shower of rain, they have prickly acacia coming up everywhere.

**Dr Robertson:** That is that whole thing about people thinking they are going to lose a massive amount of weight if you are going to quarantine them for a week before you send them off. That is a mindset that is hard to get over, of course.

**CHAIR:** Would that not suggest that the quarantining should be coming on the incoming rather than the outgoing, if that is the issue?

**Dr Robertson:** Yes, you would do that on the incoming. That is good practice. Probably most people do it, anyway.

**CHAIR:** Certainly up in Flinders we saw the gentleman who was in the act of doing that as we were there.

**Dr Robertson:** The truck would be full of it by the time it arrived, so if you can do it before as well—that is not easy; that is the hardest bit. I think it is just general good practice, that quarantine. Most farmers probably do it.

**CHAIR:** Are there any other questions in relation to weed control on government land? We might move on to some specific questions around the case studies, because we have tapped into that area already. We spent a bit of time investigating the movement of livestock and feed. We heard from the Livestock and Rural Transporters Association of Queensland. They were talking about research and practices that are occurring in New Zealand. Is the department aware of any changes that we should be making around the way we transport livestock?

**Dr Robertson:** No, I would have to take that on notice, because I cannot remember that conversation. I would have to look up the New Zealand arrangements.

**Mr WEIR:** That was regarding effluent in livestock transport trucks. In New Zealand they have dedicated areas where—

**Mr MILLAR:** I think there is one being proposed near Ipswich.

**CHAIR:** We saw the wash-down facilities in Gladstone which were funded by a large mining company, I think. Do we need more wash-down facilities around the state? Should we be looking at suggesting standards in relation to that?

**Dr Robertson:** I think that is a good question. There has to be an uptake in the use of them as well. Obviously, there are dedicated people who do that and probably a lot of companies and subcontractors who probably do that. We have the map of wash-down facilities across the state—the localities, who owns them, opening times and so on. We have that there. There was an exercise earlier to see where they should be strategically located—and probably most of them are reasonably strategically located. Whether you need more is a question about how much the usage is going to be, I think.

**CHAIR:** One of the things that was raised quite frequently was government organisations sending their vehicles on people's land and not necessarily adopting good practice. The energy contractors came in for particular attention. Are there any strategies in place to try to ensure that government departments that are sending people on to private land are engaging in good practice around weed management?

**Dr Robertson:** That is a policy to minimise weed seed spread. That is good practice. I would suggest that should occur.

**CHAIR:** Do we audit to check if it is occurring?

**Dr Robertson:** We do not audit to check.

**Mr Hannan-Jones:** I can add to that. A number of government agencies have been coming to us for advice about weed spread prevention activities—the Department of Natural Resources and Mines, the forestry section of our own department, anyone who has staff who go on to other people's land. A lot of that driver has been the land access code—that mineral resource authority holders have to provide evidence of wash-downs, or a clean-down to the landowner. They are asking that of all the other people coming onto their land as well.

In talking about the energy companies, a paper published this year looked at Powerlink vehicles travelling in South-East Queensland. In that paper they have a list of all the weeds that were spread by the Powerlink vehicles. None of our restricted or prohibited matter was on that list as being detected on those Powerlink vehicles. It is only a small number of vehicles, but most of the species were native species or other exotic grasses that were picked up along the side of the roads.

**Mr WEIR:** Still on that same theme, people are looking for these certificates. Would that be following your mapping of where these weeds are? How would that be regulated? Otherwise across the whole of the state you have to wash vehicles on every property that you attend.

**Mr Hannan-Jones:** Part of the work practices that have been developed is deciding upon a risk matrix—about whether a vehicle has travelled on sealed roads only, whether it has gone off-road, or whether it has gone into muddy areas. There have been some requests from the mineral authority holders. They were at one stage sending all of their vehicles back into Roma to get washed before they went to the adjacent property. It was adding a lot of cost on to the resource holders just going from property to property.

At the end of the day, the land access code for those particular resource authority holders was that they had to provide a document and the landholders were requiring a fresh document from property to property. That would not necessarily fit into a risk decision-making matrix where, if your neighbour's property had an infestation of GRT and you had GRT, why should a vehicle be washed down to be free of GRT travelling between those two properties? As a matter of adopting risk based decision-making practices around whether the cleaning of vehicles effectively reduces risk of the spread of a particular species and knowing where that species is in the state, the large broadscale mapping will allow someone to say, 'I'm coming from Central Queensland, where there is parthenium, going down to south-west Barcoo, where they do not have parthenium. Therefore, I should be taking risk management practices or measures on my vehicles,' so they do not spread parthenium from those two areas. It does not necessarily help you from property to property.

**Mr WEIR:** When we were up there, the capping of the Great Artesian Basin and dispensing with the flowing bore drains was mentioned. That seems like a program that is widely welcomed out there. There is a great desire to see that continue until those bore drains are removed. Would you agree that that is good?

**Dr Robertson:** Yes, definitely.

**Mr MILLAR:** Do you work closely with the Great Artesian Basin where we are capping bores and making sure that they are identifying areas that may have a higher infestation of prickly acacia? Is there a strategic approach to say, 'We really need to concentrate on this area'?

**Dr Robertson:** Not that I am aware.

**Mr MILLAR:** Do you think it is a good idea if we do?

**Dr Robertson:** For sure—if there is a strategic approach to it and there is value in that strategic approach, yes, definitely. I think it is probably a good idea.

**Mr MILLAR:** In our travels—and you were with us, John—we went across that open bore drain and you could see the prickly acacia.

**Dr Robertson:** Yes, it is really evident. If there is a strategic approach and it is at a scale that makes really good sense, of course.

**Mr MILLAR:** Not only are we capping those bores, which is important; we are also reducing prickly acacia. I think it is a good idea.

**Dr Robertson:** Yes, I would agree with you.

**CHAIR:** Coming back to where we started—the mapping—do you use satellite imaging?

**Dr Robertson:** We do. It depends on the context. When you get large rangelands, prickly acacia is a good one because you can tell it from the air or you can tell it from the photograph. We do not use it that much, though, because the resolution is not good enough or the signature that you

get off the weed is not good enough to be able to tell it. We use aerial photography a hell of a lot, and in eradication ones up in rainforests, for example, in North Queensland or other areas we use it for weeds and pest animals as well. We are exploring the use of drones so much more. We used to do a fair bit of helicopter work, though that has been a bit dangerous with a couple of incidents lately. We are adopting that drone technology as best we can. The application of it is really dependent and the signal—the ability to detect—is the big issue there, but I can see us using it more and more. The satellite imagery is great for some things but not always.

**Mr MADDEN:** We recently had the world drone conference in Brisbane. You just mentioned that the department is doing some sort of research with regard to the use of drones with regard to particularly prickly acacia, where it has already been proven. We had the major companies dealing with drones in Australia and South-East Asia at that conference. Did the department or any of their representatives attend that conference and speak to those representatives?

**Dr Robertson:** I am not sure. I would have to ask.

**Mr MADDEN:** Do you want to take it on notice?

**Dr Robertson:** I can take it on notice, but I think the comment needs to be made that we probably talk to most of those companies anyway and we are doing trials with many of those companies, both in Queensland and on the east coast. I think we work with nearly four to five different companies that do drones as well as the CSIRO, which is doing trials on new imagery techniques.

**Mr MADDEN:** It seems clear that, when it comes to technology, if we are ever going to at least manage prickly acacia it will be through the use of drones. There is just no other technology—short of reintroducing sheep and having them control the seedlings—but there seems to be no other area. Has Biosecurity taken any efforts to fast-track that research?

**Dr Robertson:** We were funding research with CSIRO, as I mentioned, and in rainforest in terms of the detection of weeds from the canopy. Rainforests are extremely difficult because it is not a flat surface. You have all these ups and downs, so resolution is really important. That work went well but CSIRO are not doing it anymore and we are working with a number of drone companies, looking at the cameras they can carry. The drone is not the issue, because many drones have cameras; it is the camera technology and the image-processing technology. That is where the problem is—you can take 1,000 photos—so that is where we have been working with a lot of companies, both in that sort of rainforest environment and in other agriculture. We have also been working with drone use for pest animals out west at night with night photography to determine dogs, cats and other feral animals in terms of what is the difference between that and a cow or a kangaroo. We are doing a whole number of things, but, again, it is down to the ability to detect rather than necessarily, 'Can this thing fly?'

**Mr MADDEN:** Just focusing on prickly acacia and not rainforests or feral animals, has Biosecurity considered accessing the funds available through Advance Queensland to encourage researchers, such as the research currently being done at QUT next door, with regard to the use of drones—and drones in the ocean as well as drones otherwise? Has Biosecurity considered going out and seeking graduate students who want to undertake postgraduate studies and access funds available through Advance Queensland to try and fast-track some of this research?

**Dr Robertson:** Again, through CSIRO and others we have done some work, but no. Can we do more?

**Mr MADDEN:** I apologise, but I am not talking about CSIRO. I am not talking about any other form of government; I am talking about postgraduate students. Has Biosecurity considered getting on the front foot and seeking out students who are interested in this particular area?

**Dr Robertson:** I do not think we have done specifically as you ask, but postgraduate students would not have been employed through CSIRO and other projects to do that.

**Mr MADDEN:** Is your answer that the department is not interested?

**Dr Robertson:** No.

**Mr MADDEN:** I am just trying to get some feedback here. I think this is a great opportunity for Biosecurity to use our brilliant students working in this area and to use funds that are already available through our government through Advance Queensland to really advance this area that we all accept is the technology that is going to get on top of—again, I am just talking about prickly acacia—prickly acacia and stop it getting into the Lake Eyre region.

**CHAIR:** I think the question has been answered in that the approach taken is via CSIRO, but if you want to elaborate—



**Dr Robertson:** Jim, it is not a case of not being interested at all. I think we are. We do a lot with drone companies. You are talking about a student, as I understand, who will do a particular application or a particular use of that technology to do it. A lot of the companies do that now. They have the machine; it is about just how they apply that. I think we do it. We have not, as you are indicating, taken up the opportunity to grab postgraduate students or graduate students at least to do that. Yes, we could certainly do more.

**Mr MILLAR:** That would be a good thing to take up with Leanne Enoch.

**Mr MADDEN:** People have to apply for these grants. The grants are available.

**CHAIR:** As there are no further questions, that concludes today's hearing. Thank you very much for coming down. It has been a long journey and both of you have been involved for quite a bit of it. There were a couple of questions taken on notice and we would appreciate responses by Friday, 10 November. We may have some additional questions when we review our notes that we might want to consider, but we will put those to you in writing as soon as we can. A transcript of these proceedings will be published on the committee's parliamentary web page as soon as it is available. Thank you very much for today. I declare this public hearing closed.

**Committee adjourned at 11.22 am**