



COMMONWEALTH OF AUSTRALIA

# Proof Committee Hansard

## SENATE

RURAL AND REGIONAL AFFAIRS AND TRANSPORT  
REFERENCES COMMITTEE

**Adequacy of Australia's biosecurity measures and response preparedness, in  
particular with respect to foot-and-mouth disease and varroa mite**

(Public)

WEDNESDAY, 12 OCTOBER 2022

NEWCASTLE WEST

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## **RURAL AND REGIONAL AFFAIRS AND TRANSPORT REFERENCES COMMITTEE**

**Wednesday, 12 October 2022**

**Members in attendance:** Senators Cadell, Canavan, Colbeck, Sterle and Whish-Wilson

### **Terms of Reference for the Inquiry:**

To inquire into and report on:

- a. the adequacy of Australia's biosecurity measures and response preparedness, in particular with respect to foot-and-mouth disease and varroa mite;
- b. response to and implementation of previous reports into biosecurity; and
- c. any related matters.

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**FULLER, Mr Stephen, President, NSW Apiarists' Association Inc**

**SKINNER, Mr Matthew, Executive Councillor, NSW Apiarists' Association Inc**

**Committee met at 09:00**

**CHAIR (Senator Canavan):** I formally declare open this hearing of the Rural and Regional Affairs and Transport References Committee inquiry into the adequacy of Australia's biosecurity measures and response preparedness. Today we will hear from a number of representatives involved in Australia's biosecurity preparedness and response. Today's hearing is a hybrid hearing, with some witnesses appearing in person and others appearing via teleconference. I thank all of the witnesses for appearing today.

These are public proceedings being broadcast live via the parliament's website, and a *Hansard* transcript is being made. I remind all witnesses that in giving evidence to the committee they are protected by parliamentary privilege. It is unlawful for anyone to threaten or disadvantage a witness on account of evidence given to a committee, and such action may be treated by the Senate as a contempt. It is also a contempt to give false or misleading evidence. Witnesses also have a right to request to be heard in camera. If a witness objects to answering a question, they should state the ground upon which the objection is made and the committee will determine whether it will insist on an answer, having regard to the ground which is claimed. If the committee determines to insist on an answer, a witness may request that the answer be given in camera.

Today we will be hearing from both Commonwealth and state government agencies. For this reason I remind senators and witnesses that the Senate has resolved that an officer of a department of the Commonwealth or of a state shall not be asked to give opinions on matters of policy and shall be given reasonable opportunity to refer questions asked of the officer to superior officers or a minister. This resolution does not preclude questions asking for explanations of policies or factual questions about when and how policies were adopted. If a witness objects to answering a question, they should state the grounds upon which the objection is made, and the committee will determine whether it will insist on an answer, having regard to the ground which is claimed. If the committee determines to insist on an answer, a witness may request that the answer be given in camera. Commonwealth officers appearing today are also reminded of a Senate order specifying the process by which a claim of public interest immunity can be raised. A copy of the order is available from the secretariat.

I now welcome representatives from the NSW Apiarists' Association. I understand information on parliamentary privilege and the protection of witnesses giving evidence to Senate committee has been provided to you. Thank you very much for your submission; it's been very useful for our processes. You are able to make an opening statement if you so wish. I invite you to do so now, and then we'll go to question.

**Mr Fuller:** Good morning, Senators. I'd like to thank you all for allowing NSW Apiarists' Association to present our views today. The recent *Varroa destructor* incursion has revealed certain potential problems maintaining our unique freedom from this devastating pest to honeybees. Our submission identifies the problems and offers potential solutions to help Australia remain varroa free.

The registration of beehives is undertaken by the state and territory governments. All are different, and there are variations between the jurisdictions on registration charges, duration of registration, incentives, penalties and encouragement for registration. There is very little recognition in the current arrangement that many commercial beekeepers are migratory. Just to explain that a little bit, we do move about every six to eight weeks, and we do chase honey flows. As suppliers of pollination services, we need to move our bees so that they're kept at a strength that's optimum to provide these services. That's in all different jurisdictions. The different jurisdiction registration and database data is not readily accessible. An example of that are the almonds in Victoria. We could have beekeepers from four different states there—from Queensland, from New South Wales, from Victoria and from South Australia—and it's very hard to find out where they come from. We need to set up a national framework to assist in immediate recognition, communication of problems, rapid tracking and that sort of stuff. That would help our industry immensely, and it's not there at the moment.

The industry is proposing to reduce the cost for amateur beekeepers in the jurisdictions, to encourage them to register. It's one thing that's been identified to deal with the incursion. There have been about 570 new registrations just in the last three months. It also helps our industry with the surveillance system. It's essential that all jurisdictions fully participate in these national arrangements. Recent developments in international transport due to supply chain issues can require very quick boosts in surveillance capacities in what have been deemed 'low-risk ports'. This would require an effective information-sharing arrangement with the appropriate ports and airports. What we find there in that example is that, to us, every port is a high risk. If anything can come in, we don't see it as a low-risk area. The information would then be backed up by quick response capabilities in delivering appropriate surveillance.

There is little reserve capacity for maintaining the full effectiveness of the sentinel hive surveillance system, as there is a limited number of beekeepers appropriately accredited to undertake these inspections. We can't just have anyone come in, because they don't know what they're seeing or realising and that could mean months between detection. A means of overcoming this potential problem is to have appropriately accredited backup or reserve beekeepers who could act as substitutes if needed and to enable the surveillance system to work appropriately. This backup system could also be used if the appropriate government departmental staff are unavailable. We're seeing that at the moment, with a lack of volunteers to carry out what's happening with euthanising, the collection of hives and so on.

There should also be appropriate reimbursement of costs incurred by the accredited beekeepers to encourage and ensure the effective functioning of surveillance systems. The small size of the industry means that there are very few expert resources within the jurisdiction departments responsible for agriculture and honey bees. A mechanism should be developed to allow the different states to provide resources, such as their own departmental honey bee experts, to other states where an emergency response is required. We have noticed that that's been a big issue with this incursion as well.

Pollination-dependent industries have an incentive to help, but are not the only group that benefits from maintaining effective biosecurity arrangements for the industry. An example of that is the container industry; a lot of containers come in, and we see that as a part of biosecurity as well. Another part of pollination is livestock. People don't realise that we actually pollinate a lot of seed crops—seed grasses, alfalfa, clover and all that sort of stuff. So honey bees come back into meat, livestock and all that sort of thing.

The last point I want to bring forward is that taxpayers are indirectly beneficiaries as well, as new and potential honey treatments for bacterial infections are reducing and have the potential to reduce medical costs in hospitals, for example, quite substantially. The other thing, and another part of health, is that less pollination means less fresh fruit, which then means people aren't eating as healthily.

Those are the points I'd like to raise. I'm open for questions.

**Senator WHISH-WILSON:** Mr Fuller or Mr Skinner, could you give the committee a quick update on the situation in New South Wales from where you sit and your understanding of where things are at with containment. In your view, is eradication possible?

**Mr Fuller:** Hopefully, the government has got it right with eradication. We are against a lot of things. Australia is unique. When I say that, we're also pretty late into the season, what we call 'swarming season'. Bees are leaving now, so we need to get onto the feral population. That's our biggest problem. The managed problem isn't an issue, because we know where those bees are. We don't know where the feral hives are. I'm not 100 per cent up to where they are with the situation. I understand there are still a few thousand hives to be euthanised here in the Hunter Valley. On Nana Glen, as far as I know, they've euthanised and they're ready to start baiting, and they're starting the baiting trials at Jerrys Plains at the moment.

**Senator WHISH-WILSON:** Just to be clear, on the baiting trials, is the fipronil bait targeted at the feral hives specifically, or is it also being used as part of the general eradication process?

**Mr Fuller:** All managed hives should be removed by now, so it should be targeted mainly at feral hives or unreported hives.

**Senator WHISH-WILSON:** In your experience, how effective are the fipronil baiting programs? I've used them for European wasps in my past. I didn't find them to be always effective, but that was on wasps.

**Mr Fuller:** I haven't been involved in the baiting, but I have read Dr Rob Manning's report from Western Australia. They can't give a 100 per cent clearance; it has about a 97 or 98 per cent effectiveness. That concerns me because if we miss one mite, and it takes one mite, it starts all over again.

**Senator WHISH-WILSON:** Are any of your members—volunteers, for example—involved in the baiting programs for the feral hives, or is it all trained DPI people?

**Mr Fuller:** No, we've had a really great group of volunteers from all over Australia. I think you'll hear from Sheila Stokes later on. She set up a database, which was great, and we've had people from Tasmania, Queensland—beekeepers have been helping, and they're still helping now. If we didn't have the beekeepers I don't think we'd have the manpower. They been from everywhere, from all states. It's been great.

**Senator WHISH-WILSON:** Going back to my original question, do you feel like eradication is a possibility? There's obviously been a focus on containment and understanding the spread, the vectors and the metrics, but do you think eradication is possible?

**Mr Fuller:** Personally?

**Senator WHISH-WILSON:** Yes.

**Mr Fuller:** I'm going to say no.

**Senator WHISH-WILSON:** Would you like to expand on that as to why?

**Mr Fuller:** My problem is the eradication of the feral hives and with beekeepers doing right.

**Senator WHISH-WILSON:** By 'beekeepers doing right', do you mean reporting the movement of hives in particular?

**Mr Fuller:** Exactly.

**Senator WHISH-WILSON:** I know you have to be careful about what you say here, but in terms of the association, are you getting compliance across your association? What's happening with penalties and the regulation of this?

**Mr Fuller:** I haven't heard of anyone being actually prosecuted completely. I've heard that 31 notices have been given. That would be something that DPI compliance could confirm. What I do know is that there has been a little bit of an attitude of 'it'll be right' or that beekeepers can't wait any longer to get permits or declarations. The declaration is really easy. It is online and it is instant. Using myself as an example, when I am working in a horticultural industry and I have bees pollinating, I may have a phone call saying I need to remove the bees in 48 hours or tomorrow because they are looking at the weather, when they are going to spray and all this sort of stuff. So I have a two-day period to get those bees out and, if I can't get that permit, what do I do? I have had 50 hives sprayed so far in the last two weeks and I have no reimbursement because it is purple.

**Senator WHISH-WILSON:** Because it is what—sorry?

**Mr Fuller:** Because it is a purple zone, so there is no ORRC at the moment.

**Senator WHISH-WILSON:** But do you expect that will flow, that you will get compensated?

**Mr Fuller:** It has been asked for but it hasn't been approved yet.

**Senator WHISH-WILSON:** Have you asked the New South Wales government?

**Mr Fuller:** Yes, we have asked the DPI to look into it.

**Senator WHISH-WILSON:** The federal government has provided some compensation in the early stages.

**Mr Fuller:** Yes, but that is more for the red zone though.

**Senator WHISH-WILSON:** Well, that is certainly something we can ask the department about. I understand the fines for non-compliance are fairly serious, fairly high. Is that correct?

**Mr Fuller:** Yes, that is correct. But are they going to enforce them? We need them enforced. We need them taken to the full length to make everyone toe the line.

**Senator WHISH-WILSON:** On that basis, is it a lack of evidence that has led to no prosecutions or is it just the lack of will?

**Mr Fuller:** Sometimes it is a lack of evidence and sometimes it is very hard to prove it, so it is not really the evidence. The evidence is there but if someone keeps saying they doing this and doing that then there is really no evidence in the bush. It is: Who was there to actually see it and witness it? There is just no-one. You might know that they have moved from a zone that is highly contagious to a clean area but you can't prove that. This is the record keeping that we really need push forward. We need a unified record keeping. We have a code of practice.

**Senator WHISH-WILSON:** But that is of voluntary code of practice, correct?

**Mr Fuller:** Yes, and that has to be enforced.

**Senator WHISH-WILSON:** Are you suggesting that should be mandatory?

**Mr Fuller:** Yes. It is law at the moment in New South Wales to report all your movements. There have been instances come out of this where people have registered for 10 hives but they actually have up to 300 hives. How do I know how many hives I have in New South Wales? These are things that must be updated every year or at the least every two years. But your hive movements must be recorded all the time.

**Senator WHISH-WILSON:** Is it difficult for business operators to do that kind of recording and record the movements? Is it easy or is it something that could be helped with better systems and better processes?

**Mr Fuller:** We are looking at better systems. We are looking at moving to apps that are really easy to record it in straight away and it is uploaded only to people who need to see it—not a public thing. Beekeepers are very private about where they are putting their bees. Because if you're on a honey flow or you're getting bees somewhere else—

**Senator WHISH-WILSON:** Pardon the pun.

**Mr Fuller:** Something easy—yes we could do it.

**Senator WHISH-WILSON:** In your earlier comment you recommended the establishment of a national registration framework. Where you have got to with that recommendation? Have you had any feedback at all on it or have you seen any progress?

**Mr Fuller:** The biggest problem is the states don't want to talk to each other. Each state wants to keep on staying separate. As I said, we have this code. It took three years to get the biosecurity code through because everyone was saying 'I won't do this,' 'I won't do that' or 'I want to do something else'. Other than that, I have had no feedback, so I think we need to re-address it, revisit it, get the states around a table. Especially in this eastern seaboard, taking the pollination out, I have Queensland beekeepers coming into New South Wales for honey. I have Victorians coming in for honey. Then when there are dearths or a lack of honey in certain states, all those beekeepers move to other states. So this eastern seaboard, those four states, really need to get together. At this time, I know B-QUAL, which is part of AHBIC, is talking about getting a national freedom of movement involved there but that is taking a bit of time.

**Senator WHISH-WILSON:** We will certainly pursue that. Obviously there is a role for the Commonwealth to provide harmonisation of that architecture. In terms of compensation from red zones, is it still a wish of your members to be compensated for the loss of pollination services income as well as the fee that—

**Mr Fuller:** Going back a little bit, we used to come under Animal Health Australia and we moved over to Plant Health Australia because the horticultural industry derived more benefit from bees than the animal industry. This is where the argument is at the moment. Matt might be able to answer that with me. A lot of beekeepers didn't go to the almonds this year. Those beekeepers do rely on that almond cheque to get them through.

**Senator WHISH-WILSON:** How important is that in general? Do you have any metrics? What percentage of income would be derived from those pollination services?

**Mr Skinner:** Some blokes set their whole business up around pollination, so it could be from 50 per cent to 100 per cent.

**Senator STERLE:** Why didn't they go?

**Mr Fuller:** Some came out of Queensland and they weren't sure if they could get back into Queensland. The ones who came from Queensland into Victoria, with the Braula fly, got stuck there. When the bees finish on the almond pollination they need to be moved quite quickly onto honey; otherwise they go backwards.

**Senator WHISH-WILSON:** Do you mean their energy goes backwards?

**Mr Fuller:** Yes, they lose their numbers. They may have good pollen but they need the nectar. They usually move them out onto the broadacre canola, and the bees start setting up then for honey. What when Braula fly came in, there was a double wall put up. All these walls went up on the borders, so we had Queensland bees stuck in Victoria. The guys who didn't want to move were sort of cheering. They said, 'Okay, we didn't get stuck,' but then pollination was very light on for bees in Queensland, because you have avocados come on and macadamias come on straight after. These were the problems.

**Senator WHISH-WILSON:** We asked the Queensland government yesterday and they said they will put a stop to any movement across the borders, as has Victoria. We have asked the federal department whether they would consider looking at a compensation scheme based on income forgone from pollination services and they haven't ruled it out. There must be historic records. You must keep records of your income from pollination services so you can establish that track record.

**Mr Fuller:** Yes.

**Senator WHISH-WILSON:** In terms of training, you talk about there being a shortage of qualified personnel to inspect hives but what about personnel for field operations? For example, when you look at the biosecurity emergency response teams, New South Wales only has 35 trained people and they are mostly in DPI, whereas Victoria has 180 or so. That then falls heavily on you guys and voluntary beekeepers to do a lot of that work. Why hasn't there been as much training in New South Wales?

**Mr Fuller:** I think we got a little lackadaisical. We really need to pick that up. That has been identified in this. The number of BERT-trained beekeepers in New South Wales is just shocking. It is another area that we need to pick up. It is easier now to see it once the horse has bolted, but we need to keep on top of that in the future.

**Senator WHISH-WILSON:** Is that a funding issue or do you think it is a cultural issue?

**Mr Fuller:** There have been funding issues there as well.



**Senator WHISH-WILSON:** Perhaps if I get time, I can come back to that.

**Senator CADELL:** Going back to the first thing: you spoke about the transient nature of commercial beekeeping. I don't ask you to know, but in your opinion was the Nana Glen-to-Coffs outbreak from Newcastle caused by someone doing the wrong thing?

**Mr Fuller:** Not by doing the wrong thing; he didn't know he had varroa. To explain what happens now with varroa: unless you're looking for a disease or a pest they are really hard to see. So he has most probably done his inspections and then moved them. As far as I know, he was not aware that he had varroa. We did have sugar shake month only two months before, but unless you do it correctly you may not pick it up. And once you even get to looking at it, we have a mite here in Australia that looks very similar to a varroa. So a little bit of training goes a long way.

**Senator CADELL:** Are we using sugar shake over the alcohol test because, obviously, it's less lethal?

**Mr Fuller:** Yes; sugar shakes don't usually kill the bees. But also, once you start dealing with alcohol—and we use a smoker that has hot, flammable liquid—they don't really like it. At that point, as a surveillance tool, a sugar shake is appropriate.

**Senator CADELL:** Fair enough. You said in your earlier evidence that you didn't think it could be eradicated.

**Mr Fuller:** Me, personally?

**Senator CADELL:** Yes.

**Mr Fuller:** Personally, no.

**Senator CADELL:** I get that. What does the industry look like in New South Wales with varroa mite here to stay?

**Mr Fuller:** This is my personal opinion: there's not a country in the world that doesn't live with varroa. What we have to do is be able to 'medicheck' and have the correct tools available. So we need to look at organic solutions or chemical solutions—whatever the beekeeper wants to work with. We need to look at those now to have them ready so that when or if it is declared endemic then they're right to go. At the moment we don't know which way we're going; all we know is that the varroa mite is not resistant to anything, and the beekeepers have no direction or education and training.

**Senator CADELL:** Not resistant or not susceptible? I think they had some stuff that they got resistant to. There was fluvalinate and stuff like that which was used and which they developed resistance to.

**Mr Fuller:** Okay. I'm not across that. The mite that has been found here in Australia, as far as I know, has no resistance to anything.

**Senator CADELL:** Okay. Strains of bees—20,000 bees, 10,000 honey bees. In Australia do we use only a single Italian honey bee? What are we using mostly at the moment? Purdue University are looking at varroa-resistant bees. They have a breeding program. Are we looking at anything like that?

**Mr Fuller:** There are some really good programs out there—research and development is really good. Yes, it's a hygienic gene that will actually pull the mite off. These are all strains. AgriFutures Australia, which I'm also an advisory panel member for, has looked at that. I've also worked closely with Hort Innovation, and they have some good R&D. I'm all for that sort of stuff—it's really good.

**Senator CADELL:** Thanks.

**CHAIR:** Senator Sterle.

**Senator STERLE:** Mr Fuller and Mr Skinner: it was only 13 years ago when Senator Colbeck and I were in New Zealand and the Kiwis were drooling over our varroa-free country and how lucky we were to be an island. I must admit that we haven't done a lot on bees in those last 13 years in this committee, but have there been any other incursions?

**Mr Fuller:** So 13 years ago? Just before that.

**Senator STERLE:** Which means just after we got back from New Zealand.

**Mr Fuller:** Yes. Australia is going to be unique, if varroa is declared endemic, because we also have small hive beetle here.

**Senator STERLE:** Small hive beetle?

**Mr Fuller:** Yes, small hive beetle.

**Senator STERLE:** What's that?

**Mr Fuller:** It's another little pest in the hive that 'salivas' the hive; it shoots an enzyme into the honey that actually ferments the honey, and it's really putrid to work with. New Zealand don't have it, so we'll be the fourth country in the world, once this is declared endemic, to have varroa mite and hive beetle. That's going to be really hard to work with. Varroa mite will weaken the hive and small hive beetle will come in and knock it out.

**Senator STERLE:** Is the small hive beetle here yet?

**Mr Fuller:** Yes.

**Senator STERLE:** It is here.

**Mr Fuller:** It came here in 2000.

**Senator STERLE:** And it's around, but it's only—

**Mr Fuller:** It's endemic.

**Senator STERLE:** It's endemic now?

**Mr Fuller:** I've lost 700 hives just this year so far.

**Senator STERLE:** Sorry, I'm a bit—does it need the varroa mite to do the damage first?

**Mr Fuller:** No, it's a—

**Senator STERLE:** We came in with one headache and we're going away with a couple here, by the sounds of it.

**Mr Fuller:** Yes. The small hive beetle is really humid; it loves the humidity. So we see it really effective around January, February and March. Having varroa on top of it is just going to be really, really hard.

**Senator STERLE:** Okay. Can I ask you to go back to this. It pricked my ears up, because I was reading the updates in that, and one would think that we were on top of it, but it alarms me when you talk about the feral beehives. So work me through this: how the hell do we find them?

**Mr Fuller:** Ha, ha! Good question, because they're everywhere. You can beeline them.

**Senator STERLE:** You can what? Beeline them?

**Mr Fuller:** Beeline them. In other words, you might put—not a bait station—a feeding station and see where the bees are going. It can just be people reporting bees. The Aboriginals used to actually use a piece of spiderweb and hook it onto a bee, so you could see something bigger as a bee flew. But a European bee—that's what we mainly use. They're from all around Europe—Italy, Poland and all those areas. They fly up to five kilometres, and in a real hard time they'll fly 15 kilometres.

**Senator STERLE:** Gee!

**Mr Fuller:** So you now start to see why I doubt if we can track all these feral hives. So long as they're in a cove that is semiconductive in keeping heat in it—like a cave that they can keep up underneath or a cavity of a house, such as a chimney, or anywhere like that. We've even seen them inside old armchairs. Anything that's got a cavity that they can get into and keep warm in they can survive in.

**Senator STERLE:** The DPI will be here later today, but how are the DPI saying they're addressing the feral population, to your knowledge?

**Mr Fuller:** They have employed, I think, some of the recreational beekeepers who are good at beelining, and they've done different courses on that. They've also asked the public to report feral hives that they know of.

**Senator STERLE:** I'm very mindful of the time. When did you, as the New South Wales Apiarists Association, first become aware of this latest infection?

**Mr Fuller:** I had a phone call at 11.30 on 22 June.

**Senator STERLE:** Okay. Let's go back to one last thing. It alarms me when in the states we have these arguments, whether it's road statistics or whatever it is. All the states have a 'who's got the biggest, hairiest chest' sort of attitude, which really annoys me. But, in terms of your conversations as the New South Wales Apiarists Association, you're obviously a member of a national apiarists association. Is that right?

**Mr Fuller:** That's right. We come under the umbrella of AHBIC, which is our peak national body. But, representing the New South Wales apiarist peak body—so for New South Wales members—I do feel that New South Wales hasn't been addressed appropriately. That also includes the recreational beekeepers.

**Senator STERLE:** 'Not addressed properly' in terms of the conversation with the other states?

**Mr Fuller:** That's right.

**Senator STERLE:** I'm from the west, so forgive me. We're special over there. But I just thought I'd get in before the rest of my colleagues had a crack. Have you had this conversation at a national level about data collection for one and all to be able to see? Obviously, each state would keep their own data but share it evenly through the Commonwealth body. Is that what you're suggesting?

**Mr Fuller:** That's what should be happening.

**Senator STERLE:** And you've had those conversations on a national level?

**Mr Fuller:** We have personally before, but it's gone nowhere.

**Senator STERLE:** Have you taken it up with previous governments in the Commonwealth, to your knowledge?

**Mr Fuller:** Not that I'm aware of.

**Senator STERLE:** That's what I want to establish. I don't know if we're going to have the national beekeepers, Chair, but it's something that we should say, because I think it's important.

**Mr Fuller:** Yes. AHBIC presented their points at Canberra, so their statement or submission should be on record there. But yes. We do consult with them. We've also had a change in our CEO, who has changed. I myself am only new to the presidency. That's the other problem. Maybe get people who are in the roles for a certain period of time, have a little bit of consistency there, and we'll be able to have a little bit more communication. It's a little bit like what you said. There is a lot of chest-beating going on and 'I don't want to share it with you', 'I don't want to do this,' or 'I want to do that.' That's always going to happen.

**Senator STERLE:** Don't worry; it's not limited to data around bees! If anything comes to your knowledge—and the chair will let you know what the closing date is for answers to questions taken on notice—it would be helpful. Chair, I am very mindful of the time.

**CHAIR:** I've got a couple of questions, and I think Senator Whish-Wilson does as well, so we may need to extend things a little bit. Thank you for your patience. It is a bit of sombre news this morning, Mr Fuller, to hear you say that eradication is not possible, in your view. When I go to the official Australian government website about varroa mite, they say:

If varroa mite were to establish in Australia, European honey bees and the pollination services provided could be reduced by 90-100 per cent.

Given your evidence this morning, do you think that is a possible outcome now—that kind of impact on the bee industry—if varroa mite is endemic?

**Mr Fuller:** Right around the world—and I've looked at all the studies and I've done a lot of reading—yes, the first couple of years are going to be really hard. But every country has bounced back. Beekeepers are very, very good at splitting hives and making new hives. Even before varroa, if I had a 10 per cent loss, I'd be making 20 per cent up. When small hive beetle came in, if I needed to make 1,000 hives up, I would make 1,500 hives up. Splitting hives is like a swarming technique that beekeepers use to make extra hives. Instead of letting the hives swarm, we split them before they swarm. That's how we increase our hives.

**CHAIR:** But we are, in your view, potentially facing the almost complete removal of pollination services for a year or two in Australia, or at least in some regions in Australia?

**Mr Fuller:** No, not with managed hives. I believe that the managed hives will lose a fair bit. With feral hives, we will lose 100 per cent over the next two years, once it becomes established. But that will also come back. With the managed hives, we'll be able to charge accordingly. If beekeepers want to be lazy, they're not going to get away with it. They're the ones that are going to end up losing their bees. Anyone who wants to do the right thing, I think they can work with varroa.

**CHAIR:** I might be going beyond your area of expertise, but what kind of impact over the next couple of years will it have on our horticulture industry, on almonds, on blueberries and on other products that rely on your services?

**Mr Fuller:** I'm in the Nana Glen area, and they've lost their rubus crop at the moment, for this year's pollination. All managed hives up there—there have been about 1,500 euthanised up there in the last three weeks. So I've been in a lot of discussions up there. I'm not quite sure of the actual monetary figure that they put on it, but, if we can get the bees back in by March next year, it'll only be this three-month period. I've guaranteed the growers that I'll work with next year—in the red zone, the purple zone or any zone—that they will have their bees. I have enough bees that will cover them for the next 10 years.

**CHAIR:** That's a little more positive to hear—that we might be able to bounce back that quickly. You mentioned your call for a national hive registration scheme. If varroa mite is declared endemic, does such a scheme become more important in terms of managing an endemic virus?

**Mr Fuller:** Yes.

**CHAIR:** How will it be used in an environment where varroa mite will be endemic?

**Mr Fuller:** I think a national register is really good. Queensland at the moment has the same number system as New South Wales. To give you that example, I'm registered as F6 in New South Wales and F6 in Queensland. So, if DPI look it up, they don't know if that's a Queensland number or a New South Wales number. It would eliminate that. That's one thing. If mites were found in my hive, they could automatically go back to me and say, 'Where have you moved these hives from?' At the moment, they don't know if I'm Queensland or New South Wales registered. I'm not too sure about Victoria. I know they have a similar numbering system as well. Once it's national, it could just be a Q, N or V in front and then have whatever way. That's a really simple, straightforward and quick change that makes it easier to identify if it's a Queensland number. With one phone call to the DPI of that certain area, we can track it.

**CHAIR:** To be clear, because I'm not familiar with this: if it becomes endemic, do we still need to track and trace the spread of the disease, or do we just give up? What happens?

**Mr Fuller:** No, please don't give up. Even if we declared it endemic tomorrow, we'd need to watch how quickly it spreads.

**CHAIR:** So we'd need that traceability, and the register scheme then becomes very important to manage it?

**Mr Fuller:** Yes, because we don't want to just throw our hands up and let it go. My way of looking at it is, if we could hold it back from taking over the whole of Australia for five years, that would be a lot better for the pollination. If we can slow that spread—and this is only going to come through tracking—that's the best way.

**CHAIR:** Senator Wish-Wilson, did you have a quick final question?

**Senator WHISH-WILSON:** I have two quick questions. As a matter of interest, the mite doesn't affect native bee populations—is that correct?

**Mr Fuller:** That's correct.

**Senator WHISH-WILSON:** Will the fipronil baiting process affect native bee populations?

**Mr Fuller:** We've designed baiting stations so that, hopefully, when the European bees are actually visiting, the native bees won't; they don't like the competition. The problem is that, when the European bee takes that honey back to its nest, that honey is laced with fipronil, and then, if that nest dies out, the native bee may visit it. So that's the only way we could see it possibly affecting the native bees.

**Senator WHISH-WILSON:** In terms of your suggestion that you made in your submission about better information sharing around supply chain, do you specifically mean ships and other movements of imports?

**Mr Fuller:** In the sense of containers?

**Senator WHISH-WILSON:** Yes. You mentioned containers as one example. Are you maybe looking at, for example, an information system that can say where those containers have been, whether they have been to countries where there is varroa present?

**Mr Fuller:** It's not so much where they're coming from; it's a container levy to support an incursion like this.

**Senator WHISH-WILSON:** In terms of funding?

**Mr Fuller:** That's right. It shouldn't just be left up to that industry or the Australian industry. There are a lot of international companies that are bringing containers over, and, if they contributed a few dollars in each container, that would be a lot of money that could help fight an incursion.

**Senator WHISH-WILSON:** But we still haven't tried to work out the source of the outbreak, right?

**Mr Fuller:** That's right.

**Senator WHISH-WILSON:** Presumably, some of these ships, for example, coming to the Port of Newcastle or even the Williamstown Air Force base are coming from countries that do have varroa mite, so that kind of information should be available.

**Mr Fuller:** Exactly.

**Senator WHISH-WILSON:** I've got a lot more questions, but we don't have time unfortunately. Thank you.

**CHAIR:** Thank you both for your submissions and your evidence this morning. It was very useful. I don't believe any questions have been taken on notice, but, if there is any extra information that you need to provide, we ask for that back by Friday 28 October 2022.

**ALLERTON, Mr Michael, Biosecurity Officer, Amateur Beekeepers Australia**

**STOKES, Ms Sheila, President, Amateur Beekeepers Australia**

[09:43]

**CHAIR:** Welcome. I understand information on parliamentary privilege and the protection of witnesses giving evidence to Senate committees has been provided to you. I now invite you to make an opening statement if you so choose, and then we'll go to questions.

**Ms Stokes:** The ABA represents over 3½ thousand recreational beekeepers, organised into 33 clubs across three states. The ABA provides information, equipment and support to our members to enable and encourage them to understand and comply with their biosecurity obligations under the Biosecurity Code of Practice and legislation in their respective states.

As president of the ABA, I was invited by the New South Wales Department of Primary Industries to be an industry liaison officer in the current varroa emergency response team. I have been working continuously in that position since the start of the response in June this year. Mike has also been involved in the response, as a volunteer beekeeper, working with surveillance and euthanasia teams in the field. Being involved in the response has provided us with an invaluable opportunity to work closely with government and the broader beekeeping industry, and has provided a unique insight into the daily operations of an emergency response.

Amateur Beekeepers Australia supports the recommendations put forward in the Australian Honey Bee Industry Council's submissions. As AHBIC's submission has already been presented to the Senate standing committee in Canberra on 8 September, I'd like to focus on the two additional recommendations proposed by us, the ABA.

Recommendation 1 is to formalise and expand the biosecurity emergency response training, or BERT, program so that a large pool of graduates can immediately be mobilised to assist in an emergency response. The current varroa emergency response has been hampered by a lack of key personnel required for field operations teams, particularly authorised officers and beekeepers. Beekeepers trained in the biosecurity emergency response training program should have been readily available for rostering directly into the response.

The BERT program has been developed so that trainees are ready to be rapidly stood up as casual employees in the event of an incursion—that's employees of the Department of Primary Industries. Although the BERT training has been delivered by Tocal College, it has been made available to fewer than 30 people—a number of whom are already existing DPI employees. By comparison, Victoria has a similar program called the State Quarantine Response Team, or SQRT, which Agriculture Victoria states on their website has over 180 trainees.

The ABA notes that in the current varroa emergency response, BERT graduates were not immediately mobilised due to a lack of clear procedures on how to contact them and how to take them on as casual employees. As a result, the response has relied heavily on volunteer beekeepers, particularly from the recreational sector, most of whom have received no formal training to prepare them for this work. Hundreds of recreational beekeepers have the skills, time and availability to assist; and yet there exists no formal process to recruit and train this significant resource to provide immediate assistance. We believe authorities should work with recreational beekeeper networks to ensure that hundreds of beekeepers are identified and put through a formal BERT course.

Recommendation 2 is to upgrade the beekeeper registration systems so that they are easier to use, to encourage beekeepers to register, and so that the information collected includes hive locations and is complete and up to date. The current varroa emergency response has highlighted that the New South Wales DPI beekeeper registration system is not fit for purpose, which has resulted in valuable time and resources being consumed attempting to identify and contact beekeepers and to determine where hives are located. The registration system should contain the current contact details of every beekeeper in the state, along with accurate information about the number and location of their hives. In order for a system to perform this function it needs to be simple, friendly and easy to use. However, the DPI system is none of these. It is in the interests of both beekeepers and government that all beekeepers are registered, and we believe the most effective approach should be one of encouragement rather than punishment.

In closing, I would like to thank the Senate standing committee for providing us with the opportunity to participate in this review. We look forward to working with all parties to improve national biosecurity preparedness.

**CHAIR:** Thank you very much, Ms Stokes. I've got a couple of quick questions to start. I'm sure you heard the earlier evidence that Mr Fuller gave that, in his view, eradication of varroa mite might be unattainable. Do you have a view on that? Do you think we can still eradicate varroa mite in New South Wales?

**Ms Stokes:** My view is that I understand Steve's position, but I have a high level of confidence that the processes being undertaken by the DPI can result in eradication. But, as Steve pointed out, there are various weaknesses which may prevent it from happening in actual fact. But I do have a high level of confidence in the eradication program.

**CHAIR:** Given that we have limited time to achieve that outcome, what are the key things you think need to be done ASAP to achieve eradication?

**Ms Stokes:** With reference to my statement, I still see resources as one of our biggest risks. The fact is that every team that goes out in the field for euthanasia of hives or for surveillance needs a beekeeper to be part of that team, and the lack of BERT has really been an issue there, and also, as we noted, the lack of authorised officers. Every one of those teams needs an authorised officer. I think if we had—I can't say unlimited resources, but, if the response had access to a lot more resources, we could get a lot more teams on the ground rapidly, and that's what really needs to happen very soon. As well as BERT trainees, authorised officers has been a major issue, and they're obviously internal DPI staff.

**CHAIR:** Mr Fuller gave you credit for establishing some kind of database, I think, or contact list?

**Ms Stokes:** Yes, he did. Thanks, Steve.

**CHAIR:** Was that to fill in the gaps in the BERT? I'm not certain exactly what you did, so take me through what you did and how that's been used.

**Ms Stokes:** Yes, absolutely. At the very beginning of the response, back in June, the AHBIC industry liaison officer was working with the DPI, and it was identified very early on that beekeepers were required. The DPI has no process for dealing with volunteers, but there should have been a process in place for casual employees under BERT. That took at least five weeks before anything happened.

In those initial few days, AHBIC was very vocal with the DPI in saying that we would have to stand up volunteers. Without volunteers, there would be no way to stand up those teams. There being an issue or potentially some confusion about insurance et cetera, AHBIC established that members of member bodies of AHBIC would be able to be insured, and so I was asked to provide the mechanism for members of AHBIC member bodies to volunteer, which is what I did. I set up an online form which was sent out to the members of the AHBIC member bodies to allow them to provide their contact and availability details, and over the past three to 3½ months I have acted as a conduit between that data collection process and the volunteer coordinators within the response. So I've basically supplied the volunteers to the DPI staff that are rostering the teams.

**CHAIR:** Congratulations on that effort. Can I just clarify something. My takeaway there was that the New South Wales government, or the New South Wales DPI, were not willing to engage volunteers because of a lack of insurance. Was that a key barrier?

**Ms Stokes:** That was my understanding at the beginning—that insurance was part of the issue.

**CHAIR:** Why can't the New South Wales government just insure these people? They could use their own balance sheet.

**Ms Stokes:** That's clearly beyond my remit. I don't know what their insurance position is. It may not have been the actual issue; that's just what I was told part of the issue was. And we knew from the AHBIC perspective that the AHBIC's insurance policy would cover members of the AHBIC member bodies. Also, as far as recruiting volunteers goes, we wanted to make sure we weren't just recruiting members of the public who actually had no beekeeping experience. By recruiting through our systems we were able to ensure some level of bee knowledge. But, apart from the insurance perspective with the DPI—insurance might play into that—as I understand it, the DPI don't have a process for dealing with volunteers; they have a process for dealing with staff. However, as we've pointed out, with the BERT teams, where it was previously agreed that they would be taken on as casual employees, even that was not in place for at least five weeks into the response—the ability to actually engage them as casual employees.

**Senator STERLE:** I just want to clarify something. I'm picking up conflicting vibes here, so perhaps you can just clarify this for me. In your opening statement you were critical, from the amateur beekeeper's position, of the lack of key personnel, the insurance, the registry and all that sort of stuff. But, by the same token, you said that, contrary to Mr Fuller's evidence, you believe the DPI are on top of it and can eradicate varroa. Is that correct?

**Ms Stokes:** Yes, absolutely. Just because we've identified issues or areas for improvement doesn't mean we don't support the entire process. There are plenty of things that are going right, but I have not highlighted the things that are going right in my statement.

**Senator STERLE:** Sure.

**Ms Stokes:** So yes, I think all in all—and, as I pointed out regarding my involvement in the response—it's been an invaluable experience for us to have that level of involvement. It's been great that industry is consulted in many of the decisions being made by the response. I do have a level of confidence that what is being done is correct. But these are some areas that I've highlighted that could do with improving.

**Senator STERLE:** When you say 'do with improving', do you mean to get the process moving a lot quicker? Is that what you're saying?

**Ms Stokes:** Yes. This inquiry is all about preparedness. I think being in an active response right now gives us a great opportunity to learn lessons from the current response to take to preparedness for future incursions. Preparedness is the key, and I'm all for looking at lessons learned here for future preparedness.

**Senator STERLE:** Right. And is that a frustration that you've shared with DPI? Have you shared the concerns that you have?

**Ms Stokes:** Oh, yeah!

**Senator STERLE:** Okay, because they'll be here later, and I want to follow up with them and ask, 'Why haven't you done that?'

**Ms Stokes:** Yes. The DPI are very aware. Regarding the concerns about the beekeeper registration system, which also link into what Mr Fuller was saying, we have been discussing those for many years with the department—that we are dissatisfied with their registration systems and we find that they are a deterrent to registering. We would like to see those registrations being friendly and engaging and encouraging people, because—this is a major thing we see in this response, finding that many beekeepers are unregistered—there is an assumption from government, I find, that if people are unregistered it's because they're deceptive, naughty people, whereas I see that from the beekeepers' perspective, where I say, well, this beekeeper may have tried to register and may have found that system too hard and walked away from it. I think making systems easy to use will be a benefit to everybody. But the DPI is certainly aware that we have that issue, and they have been for many years.

**Senator STERLE:** And now's not the time, but it could be a case of, 'See, we told you so.'

**Ms Stokes:** Oh, look—

**Senator STERLE:** Anyway, you don't have to answer that—

**Ms Stokes:** I don't like to say, 'I told you so', but—

**Senator STERLE:** Can I just ask one last thing: what is the BERT?

**Ms Stokes:** The Biosecurity Emergency Response Training program is a system that came out of some exercises that were done several years ago to do with preparedness for an incursion like this. A recommendation came out of those that a Biosecurity Emergency Response Training program should be developed, specifically with the aim of training up appropriate personnel who are ready to be stood up in the event of an incursion in a casual-employee capacity. So that was the recommendation from that exercise, and that was taken up. As a result of that, the biosecurity emergency training program was developed. However, it hasn't been made available, and so the ABA, our organisation, has spoken to DPI and to Tocal. Tocal College delivers that training. So we've spoken to them several times to say: 'Look, we've got thousands of beekeepers. How do we get people engaged in this program?' But it's never been made publicly available. The 30 or so people who've been trained in that program have been handpicked by the DPI, and we haven't had the ability to nominate more people for that course. So the whole point of that course is to be prepared for an incursion so that when an incursion starts the first thing that should happen is that the emergency response team should be able to say, 'Okay, take on all of those or as many as we need from the BERT trained pool as casual employees, and there are—

**Senator STERLE:** Sorry, if they had picked up the recommendations from industry and had progressed it and said, 'We've better be prepared, rather than reactionary, as we normally always are,' what would have that meant to the infestation we have now? Would it have been contained, hopefully, smaller, or would we have, hopefully, been through it quicker?

**Ms Stokes:** Through it quicker, I think would be fair to say. What we've learnt from this particular incursion is that our surveillance has shown that it was already established more than we would have liked once it was discovered.



**Senator STERLE:** So you found out in June that it had obviously been here quite a few more months before.

**Ms Stokes:** Yes, the DPI's investigations have shown that it would have been here prior to that. I think that having those BERT trainees available at that point wouldn't have prevented the spread. Since the detection, I don't think what we've been witnessing is spread; what we've been witnessing is the results of surveillance in delimiting the area. Having those teams available earlier, getting more boots on the ground doing surveillance, would have enabled us to delimit. Before the eradication program could start, the delimitation had to be done. To delimit that area is a time-consuming process. It could have been done a lot more rapidly if trained personnel had been available sooner, and also, once the eradication program was started in earnest, that could have happened a lot faster. It's been the restriction that has been slowing that process down. There have been other things that have slowed it down—for example, waiting for the owner reimbursement costs framework to be agreed nationally. That held up eradication as well. But definitely a lack of trained personnel has slowed things down.

**Senator STERLE:** It certainly gives us an opportunity to put a few questions to DPI.

**Senator CADELL:** Thank you for your evidence. In the extremely unlikely situation that I, as a person who has an extremely anaphylactic reaction to bee sting, decided to go off and buy a hive and start doing this as an amateur, not registered—we've heard a lot of talk about the feral population of bees. Is it possible that I've still got bees not registered, not addressed, not euthanised. I come from Newcastle. Is it possible that's still there, and is that a problem?

**Ms Stokes:** So you're asking if—

**Senator CADELL:** Unregistered amateur—

**Ms Stokes:** we might not have detected some of those backyard beekeepers? Yes, that is certainly a possibility, but that is accounted for within the response. As Mr Fuller was referring to, the initial sweep of euthanasia of hives is to remove all known managed colonies. It's recognised that it won't remove all managed colonies—for example, the ones that you've mention that may not be registered. The approach is to remove those managed colonies first, firstly so the owners of those hives can be reimbursed for their loss, and also to pave the way for the baiting program. Once the baiting program comes into effect, by removing the managed colonies you've removed the number of bees in the environment that will go to those baiting stations. But the idea of those baiting stations is that they take out both the ferals and the unmanaged, such as your lovely flow hive, I'm sorry.

**Senator WHISH-WILSON:** Across your membership, are any involved in pollination services and the transfer of hives to different areas?

**Ms Stokes:** The general population of recreational beekeepers is a lot more static than the commercial beekeepers. We don't have any rules in place to say that commercial beekeepers can't be members of Amateur Beekeepers Australia, so some of our members certainly would be involved in pollination, but it's not a key area of interest for our association. Most of those who are involved in pollination in our association would probably also be members of the NSW Apiarists Association.

**Senator WHISH-WILSON:** When I asked Mr Fuller whether he thought eradication was possible, the two reasons he gave that he didn't think it was possible were feral populations—whether they could be totally eradicated—and lack of compliance around registering the transferring or movement of hives. Have any of your members been issued with infringement notices?

**Ms Stokes:** That information is not provided by NSW DPI's compliance team, so I've got absolutely no idea. As Steve said, we're aware that Compliance has issued some notices, but due to privacy reasons we don't know who they are. They could be my members. They could be Steve's members. They could be people who are not members at all. So I can't comment on that.

**Senator WHISH-WILSON:** I just noticed you guys nodding in the background when I asked the previous questions. Are you confident that the government, the DPI or other authorities, have the will to prosecute breaches?

**Ms Stokes:** No. I'm not very confident about the DPI's willingness and ability to prosecute and take this up. As Mr Fuller said, we have a lot of hearsay evidence of beekeepers moving, and I don't have a high level of confidence that DPI compliance are following up on all of those.

**Senator WHISH-WILSON:** They are moving them but not registering the fact they are moving them, so they're not in the system?

**Ms Stokes:** Yes.

**Senator WHISH-WILSON:** I've got that in Tasmania. I've heard that that's in Tasmania happening.

**Ms Stokes:** Yes. I know that individual cases are taken up. For example, I reported a truck of hives that I saw on the road, and I did get a call back from the compliance team to check what I'd seen and where I'd seen it. So I know that something happens, but I don't have a high level of confidence that the compliance team are following that all the way through to prosecuting. I'm particularly—

**Senator WHISH-WILSON:** Is it a million dollars for a breach?

**Ms Stokes:** It is. I think it's \$1.1 million for an individual and I think it's \$2.2 million for a business. It's something like \$137,000 per day that you continue to be in breach, I believe. Whether or not those fines are ever actually enacted, I don't know. But I do have concerns around a lack of—I don't know how to say some of this without—

**Senator WHISH-WILSON:** We have parliamentary privilege, so say whatever.

**Senator STERLE:** Just watch your language because there are truck drivers present! They don't like bad language!

**Ms Stokes:** Okay, I'll be polite! I do have a concern around the reimbursement costs. That's the framework under which beekeepers are reimbursed for loss of hives, loss of bees et cetera, particularly in the red zone, which we've already referred to, and potentially in the purple zone that's not in place yet. Under that framework, one of the things that would prevent a payment from being made out under that program is if the recipient has contravened the biosecurity order—if they have either caused the biosecurity event in the first place or have contravened the order. There are a couple of points at which we think that certain people who are entitled to those ORCs have contravened the order, and I am not confident that that is being followed up. And I would not say that if you hadn't said 'parliamentary privilege'!

**Senator WHISH-WILSON:** No, no! That's why we have parliamentary privilege—so you can say these things without fear or favour. I might just leave that particular point. Could I ask Mr Allerton: in terms of the training, noting you're a biosecurity officer, is it a funding issue or is it a cultural issue that only 35 people have been trained under the BERT system, and how easy would it be to—?

**Mr Allerton:** I'm not sure I can answer that. I did the Certificate III beekeeping program on my own dollar. It's the same training facility—Tocal Agricultural College—that provides that service.

**Senator WHISH-WILSON:** What does it cost, as a matter of interest?

**Mr Allerton:** It's listed at \$6,800, but with New South Wales reimbursement—I'm not sure what the word is—it comes out to \$1,600, which isn't bad, and it's a two-year program.

**Senator WHISH-WILSON:** And that would be tax-deductible for the school, because this is—

**Mr Allerton:** Not as a recreational beekeeper—

**Senator WHISH-WILSON:** No? Oh, okay.

**Mr Allerton:** because it's not an income producer. I am involved in income earning, so I could claim it. A lot of that biosecurity training is within that, but the BERT is specific. It's a much shorter program. To back up what Sheila says, maybe it's a funding thing—but we should be getting hundreds of people trained up, ready to go and immediately resourced to engage in a program when there's an incursion like this.

**Ms Stokes:** The short answer is that it just hasn't been made available.

**Senator WHISH-WILSON:** As in, there are just not enough places?

**Ms Stokes:** Well, no; it hasn't been made available at all. As you can tell, Mike is somebody who's definitely keen on engaging in training. I don't believe he's done the BERT training—

**Mr Allerton:** No.

**Ms Stokes:** because he hasn't been given the opportunity to do it. If he'd been offered it, I think he would probably have done it.

**Senator CADELL:** The course isn't even offered anymore?

**Ms Stokes:** It's not on the program as a course, no.

**Mr Allerton:** It's not something that you can just sign up to do. It needs to be offered to the people they want on it.

**Ms Stokes:** Just on the interstate rivalry: I would note that the website of Agriculture Victoria, which looks after beekeeping in Victoria, says, 'Would you like to train for SQRT?' which is their equivalent of BERT. 'If so, click here to do the online e-training course and we'll be in touch.' So it's a much more open process. I'd like to see something like that in New South Wales too.

**Senator WHISH-WILSON:** Just to clarify some costs you mentioned, Mr Allerton: was the \$6,800 for the BERT course or the—

**Mr Allerton:** No, that was for the Certificate III.

**Senator WHISH-WILSON:** Okay.

**Mr Allerton:** BERT would be a much, much lower cost.

**Senator WHISH-WILSON:** Senator Sterle will probably want to know what the cost would be for the BERT course.

**Ms Stokes:** We've never seen a price, because that training course is not publicly available. As far as I'm aware, the trainees that have done that course—and, as I said, there are fewer than 30 of them—are people who are DPI employees—

**Mr Allerton:** Government employees.

**Ms Stokes:** or beekeepers who have been invited to do the course by the Tocal Agricultural College. My understanding was that the reason they did that was because they were tuning their training resources in preparation for making it an available course. But we've not seen it made available, and we've asked for it to be made available.

**Senator CADELL:** Is Tocal the one that's just up the road?

**Ms Stokes:** Yes.

**Senator CADELL:** Is that now in a red zone or a purple zone itself?

**Ms Stokes:** Yes; it's in a red zone. Their hives have been euthanised.

**Senator WHISH-WILSON:** How many of your members have had their hives euthanised, if you've got that data?

**Ms Stokes:** I don't have that data; I'm happy to take that on notice and to review that.

**Senator WHISH-WILSON:** If you could.

**Ms Stokes:** What I would say is this. Our association, as I said, consists of 33 individual clubs, and the Hunter Valley club is one of our largest, with a large number of its members residing in the red zone and the purple zone. Probably our second-largest club is the Central Coast club; they have also been very heavily affected. I would be happy to get some details—some numbers—for you, if you want.

**Senator WHISH-WILSON:** Okay. Maybe this question is for you, Mr Allerton, as the biosecurity officer. On the fipronil baiting program: are you involved in that or are your members involved in that as volunteers? I understand it takes a lot of baits if you do it properly, in terms of the way you set them out in grids. Technically, they should be monitored—

**Mr Allerton:** Yes. I believe that they will be monitored. But, to answer your question directly, I've not been invited. I'm not sure it's a volunteer thing. It's actually employees—trained personnel—doing that. The only question I have is on the spacing of the grid. I believe it's meant to be three kilometres. There is a certificate that suggests 500 metres, but that would be incredibly labour-intensive.

**Senator WHISH-WILSON:** Yes—I was about to say. And you'd have to put a lot of poison out in the environment if you did that.

**Ms Stokes:** I can probably answer some of that question from my position as industry liaison officer within the response. The team involved in the fipronil baiting are recruiting—because that would be an ongoing program, rather than just the small part of the initial 100-day response. So they're recruiting, but it appears that the recruitment process is rather slow—not for that particular team, but the DPI's process; it's not quick and easy to get people on board. But, yes, they will be looking at paid contract staff—is 'contract' the right word? People taken on for a 12-month period by the DPI will be engaging in that program. Currently, as many of the bait stations in the Nana Glen-Coffs region are in forestry regions—I can't think of the agency's name; is it Forests Australia or something? It's the government.

**Senator WHISH-WILSON:** Is it state forests?

**Ms Stokes:** Anyway, that organisation—forests—is providing some staff.

**Senator WHISH-WILSON:** And National Parks as well? Would it be that reserves and national parks are going to have to be baited?

**Ms Stokes:** In the Jerrys Plains region I think two of the bait stations that are currently operating are on state forest land, and National Parks are involved. I'm not sure whether they're providing staff or not. But it's not something that they're recruiting volunteers for at the moment.

**Senator WHISH-WILSON:** As I mentioned earlier, I did some training years ago, as a vigneron, to try and knock out European wasps. It was a really bad year for them. It's a lot of hard work, and I wasn't convinced it worked—for wasps, anyway. Given this is the first outbreak we've had of varroa in the country, has there ever been a baiting program of this size before in our nation's history? Has there been anything quite like this before, for wasps or other pests?

**Ms Stokes:** Nathan Cutter, who is running the fipronil program, was, I believe, involved in yellow crazy ant eradication. So fipronil has been used, I understand, for other insects, not for bees. I believe that there have been successful baiting programs. But, again, that would be actually a question for the DPI—

**Senator WHISH-WILSON:** Yes. We'll certainly put that question to DPI.

**Ms Stokes:** This is not the first incursion of varroa into Australia.

**Senator WHISH-WILSON:** The first outbreak, though, right?

**Ms Stokes:** It's the first incursion of *Varroa destructor*. *Varroa jacobsoni* has been here before—it's a very similar varroa—and that has been successfully eradicated. That was the Townsville incursion in 2016, and proof of freedom was declared there in 2021, I think—five years later. So there is a track record in Australia for eradicating varroa. But at Townsville I don't think they used fipronil baiting. Because of the difference in climate and the spread of the mite, I think that was not appropriate for them to use in that instance. So it was eradicated by other means.

**Senator WHISH-WILSON:** Once again, I have lots of other questions, Chair, but I'm happy to leave those for now.

**CHAIR:** Thank you very much, Ms Stokes, and Mr Allerton. It was very useful for us. Thank you for your time. I don't think there are any questions on notice but, if there are, please provide those back to us by Friday 28 October 2022. Have a great day.

**HANCOCK, Mr Nathan, Chair, Plant Industry Forum; and Chief Executive officer, Citrus Australia**

[10:20]

**CHAIR:** Welcome. Would you like to make an opening statement before we go to questions?

**Mr Hancock:** Thank you for the opportunity. I'm here representing the Plant Industry Forum, which is a collective of the plant industry members of Plant Health Australia. Since 2006 the plant industries have been meeting to share and discuss biosecurity and collaborate and work together on improving preparedness and response in the background. We get a lot of benefit from sharing our experiences through different responses and outbreaks. Trying to maintain that corporate knowledge within such a large number of people is very beneficial but it's also time-consuming, and our role is voluntary.

Plant industries represent \$43.2 billion to the Australian government and we are about 54 per cent of the agricultural production, but we feel that representation in plant biosecurity is severely under-represented in proportion to other areas that are funded in biosecurity—namely, animal biosecurity.

I'm using my experience as the CEO of Citrus Australia, and I recently went through an outbreak in the Northern Territory and northern Western Australia of citrus canker. During that time, I experienced a lot of what we've heard today and what you would have heard during the inquiry—delays and difficulties in adopting things around diagnostics, surveillance, getting teams out on the ground and those sorts of things. I and others in plant industries who have experienced these issues have come back to their industries to try to work through how to be better prepared, in case this happens to us again, because it is very taxing on the person who's in charge and we are very limited in our resources and ability to just put people on the ground and do the work.

Many of the plant industries are working on—outside of the \$22 million that we've contributed to responses over the last two decades, we've also been investing our own RD&E levies, plant health levies, EPPRD levies, into more preparedness work, and that continues. In my own case, for our highest priority pests, we've been working on a range of different scenarios that we want to be ready for: being sure that we have the right agrichemicals available for our high-priority pests; being sure that we've got workable trade restrictions, should something come in and we need to have lockdowns; working on diagnostics and making sure they're fit for purpose and appropriate for the response that we're working on; trying to make sure that the surveillance that we do, and we're doing both on-farm and urban surveillance, is appropriate for the use of whichever jurisdiction we're in and can be used for evidence of absence; and those sorts of things.

We do this knowing full well the risk is that, because of our federated states, there are going to be states that don't accept this information. So we are working very, very hard as plant industries to be prepared with the risk being that the information we generate or the money that we expend is for naught because we're not working on harmonisation and being prepared to work together as one country, instead of multiple states, on the issues that come to hand. We need to do that prior to an incursion in our preparedness, and we need to do it in the incursion when we're responding.

We are working very, very hard as industries to help each other to step up to the plate and to engage with government. What we're finding is lacking is that, despite our investment, quite the opposite is happening in government. We're seeing disinvestment in plant industries. We're seeing a reduction in the number of people available. The resources, whether they be people or materials, are not available at hand. The diagnostics aren't agreed up-front. The host pest lists aren't agreed up-front. All of these things are done in a response on the fly. That's not to say there aren't multiple committees working on these things, but they're working on them very slowly because they don't have the resources to put to them to make advances and changes.

One thing that has been repeated through all of the different inquiries over the last 10 years has been that there needs to be more representation of industry at these high levels of committees, whether it be a plant health committee or a national biosecurity committee. There's no-one from industry represented there. You might say that Plant Health Australia and Animal Health Australia are part of those, but they're just observers; they're not representing industry. We need to have industry represented at the highest levels, and that needs to be repeated throughout all of the frameworks. Instead of being a bureaucracy that's bogged down on itself, industry should be in there driving this. I would go so far as to say that not just industry but independent chairs of those committees should be there as well. We have to work with them. And we know that a lot of them put a huge amount of effort into responses like these. I have relationships with all of the plant health managers, and we want to get on with them, but they are constrained by their own limited resources. There isn't transparency in funding. There isn't an understanding of where the money is coming in and where it's being spent, and we are increasingly at risk of more incursions and more issues.

Our industries have suffered multiple responses due to materials coming in, particularly through sea freight, but we haven't seen any advancement in that space. We wouldn't be looking to generate a levy out of that space without also investing in that space. Somebody raised earlier today the understanding of where containers have come from in the past. That's something that I know the freight industry has put forward as a solution, as well as more training in the freight industry. We'd be all for that. This money should be coming in to help the freight industry better prepare, be better trained and to better understand, and to provide more people to respond when there is an inquiry about whether this is a pest or something we don't need to worry about, traceability of containers, but it also should be building a war chest for responses like this. Whatever mechanism the inquiry decides on or works towards, it should be hypothecated. That money should be held in reserve only for biosecurity. It could be spent in any part of biosecurity, whether preparing the freight industries or responding to something generated by a freight industry—not intentionally but by association with where the containers have been sent to—there should be some connection there.

We reflect on the fact that the food-and-mouth disease levy that was taxed back in the eighties or nineties unfortunately became general revenue. If that money had been kept and hypothecated just for responses, we might not be having a discussion about the lack of resources for responses and working on biosecurity. The risk pathway is something we want to investigate. It's not down to just that component, but it is a very big component. There are also people within the plant industries that could be doing more. We won't get into that too deeply, but I think there's work to be done.

One of the things I've mentioned already, and that I've also heard you talk about, is traceability. One of the things that was most impactful in our recent response was trying to make heads or tails of where product was being moved around by humans. The citrus canker was on pot plants—it was on potted limes that were being moved around the country. We need to be able to have much better understanding of the grower database, which we own and maintain but in which could do more. There is lots of technology that we are adapting and putting into our systems piecemeal. We're using a satellite system that identifies citrus, and we're going out and verifying that, but we need more funding and more access to that technology.

As well as that component, the nursery system also plays a major part in our response, and in multiple responses. Where there are high-priority pests that are connected, we need to be able to say where all the nurseries that produce citrus plants—or mangos or avocados, whatever plant and whatever response you're looking at—and where the growers are located. In our experience, when the citrus canker response happened in the Northern Territory, we had some names and addresses but we didn't have them all. We could do better. That's a very minor part of the industry—there are just a handful of growers in the Northern Territory and northern Western Australia—but the response cost us nearly \$20 million. Our industry is paying back nearly \$4 million of that amount. The response itself employed up to about 200 people. If that response had happened in a major growing region, it would have been a very different situation.

**Senator STERLE:** You say that was in 2006 or 2005?

**Mr Hancock:** Yes, 2004 or 2005, that's right. I'll leave it there. I've gone past my two minutes.

**CHAIR:** It's all right, Mr Hancock, your evidence is very direct and useful. You've effectively provided two submissions to our inquiry, so we appreciate your productivity.

**Senator STERLE:** Is it just me, or is it getting cold in here? Maybe it's because we're talking about citrus canker. I remember that was my first inquiry, and to this day no one got prosecuted. It was a blight on our biosecurity in this nation that it could be smuggled into the NT, and that the inspectors gave about a week's warning that they were going to come and have a look at a suspect. We saw the industry wiped out. It was disgraceful.

I want to go to your submission, Mr Hancock. You mentioned a number of previous reviews into biosecurity, and you commented that 'very little progress has been made against the recommendations'. Was that the Craik review that you were aiming those comments at?

**Mr Hancock:** I think they were all very similar reviews. The recommendations that came out of them were almost cut-and-paste, to a degree. There are a lot of common problems that have been reported on by different reviews, but it was the Craik review in particular.

**Senator STERLE:** This committee has had a fair bit to do with that work being around and, all of a sudden, disappearing again. You also say in your submission to the inquiry that you recommend a 'restart of consultation on the Biosecurity Imports Levy'. Do you want to go into that a bit more?

**Mr Hancock:** Yes. The Craik review found that there should be a levy on either containers or vessels, and the Australian government at the time put together a stakeholder group and looked at developing a levy. I don't think

the consultation was done early enough, and I think the decisions were made too soon, before the process had played out. I think that probably got railroaded by interest groups in the end.

**Senator STERLE:** Yes, definitely.

**Mr Hancock:** There's plenty of evidence out there internationally that the freight routes are a major component of the increasing incursions, and we need to find a way to increase the available resourcing to adapt to that increasing threat. I would like to see that conversation restarted with our industry, and the freight and shipping industry involved, and some common goals sought. As I said in my opening remarks, we shouldn't be taking that money off them and then not using it for their own improvement. I think there's a lot of research and also investment that could be done in the freight industry that would bring them along to global standards and some global aspirations that are being set by associations internationally.

**Senator STERLE:** For the benefit of the committee, my memory's not all that fantastic, but I think there was a fair bit of pushback from the mining industry—is that right?—and cement. Was it cement?

**Mr Hancock:** Yes, I think so. On the face of it, you might think that a honey bee—let's just use that because it's topical—wouldn't be milling around in some cement.

**Senator STERLE:** You wouldn't think so, no.

**Mr Hancock:** But, as previous speakers said, if there's an alcove or a protected space on a boat and that boat is in port somewhere and bees swarm to that boat and create a hive and then it crosses the sea, it's just as much of a risk as anything else coming in that could bring in, for instance, that. As we've seen, brown marmorated stink bug is coming through in a range of different products you wouldn't even think of, such as cars, and there's khapra beetle coming through in nappies and in insulation in refrigerators—all sorts of things. These are not incursions that have been generated by any risky activity being done by our industries, but our industries are paying for those responses.

**Senator STERLE:** If we could restart consultation around the biosecurity levy, how would you see the levy being implemented?

**Mr Hancock:** Through the review, there were a number of ways that it could be done. I can't remember the acronym, but it was to do with the vessel number and how many units it had on it. I think there are people out there who would have a good understanding of the most simple way to work in the systems that they have already—what cargo is coming in and on what vessel and what the risk on that vessel might be. But I think it also goes to the question: what's the traceability of those containers, where have they come from and how high a risk is what's on that boat compared to, say, a cement vessel or other vessels that are potentially less risky? I think that's the work of the group that should be considering how to come to an equitable way of levying that risk pathway.

**Senator STERLE:** You won't get any argument from me. I've been banging on about this for years. That's the trouble: we don't consult with the men and women who have their hands on, as I say, the steering wheel or whatever the levers might be.

**Mr Hancock:** The tiller—ha, ha!

**Senator STERLE:** Yes, that's right. You can tell. That is a serious lack, but that's not just your industry, unfortunately. When the government did drop or shelve the legislation, who were the losers?

**Mr Hancock:** Absolutely the plant industry, the horticulture industry and, to a degree, probably animal biosecurity as well. Let's be frank: it's the whole community—everybody. If we get a citrus pest that comes in, like huanglongbing, which is our worst citrus pest—

**Senator STERLE:** Which one?

**Mr Hancock:** Huanglongbing. It's sometimes called HLB or greening disease. It's spread by a very small insect a bit like an aphid; it's called a psyllid. That is not going to just kill the citrus trees and production in Mundubbera or in Harvey and Moora in Western Australia; it's going to kill them in the CBD. It's going to kill everybody's trees. You're not going to have a citrus tree in your back yard. Nearly every Australian back yard has some sort of citrus tree in the back of it, and that's one of the issues that we have in terms of the risk that urban gardens pose for us. That's why we're doing some work in that space as an industry, but that can be said of multiple industries. Ultimately, as the national biosecurity plan that was recently released says, this is a shared responsibility, but we're not sharing that in all the ways it could be shared in. We're not sharing responsibility in terms of representation at those committees that I've spoken about. We're not sharing it in terms of the risk pathway and the financial contribution.

**Senator STERLE:** Yes. I'll put my head out there. I don't mind one little bit, because we fell over backwards to protect a couple of miners and the cement industry, without thinking about food production and our food producers—

**Mr Hancock:** Absolutely.

**Senator STERLE:** and our food security. It was just appalling that a couple of corporations could have so much pull.

**Mr Hancock:** I agree.

**Senator STERLE:** It's just disgraceful. Anyway, we're on the same level here. So, if we got back to a biosecurity levy—which at the time had the support of industry, yet you've mentioned your mob's put in \$22 million so far—who should pay the levy, if we had one?

**Mr Hancock:** I think it can be paid by the shipping company, and then they put it out through their invoicing back to their customers.

**Senator STERLE:** They're good at that. I can tell you they're good at collecting that in shipping.

**Mr Hancock:** One of the reasons they put forward for not wanting to be involved in levying was that there had just been bushfires and other things, and that would potentially put the price of imported goods up. But I can tell you what: they didn't miss when it came to putting the fees up on all of our cargo over COVID.

**Senator STERLE:** You're not suggesting shipping companies are the new Ned Kelly, are you? Because I am. I know the time, and there are other senators who want to ask questions. When can I put a question to Senator Cadell to make sure he's not one of the 31 that's been investigated. You're alright there, Ross? Okay, good. Thank you.

**CHAIR:** I've just got a couple of quick ones, and then we'll go to other senators. You note in your submission, Mr Hancock, that there's no plant industry representative on the national implementation committee for the National Biosecurity Strategy. Why is that?

**Mr Hancock:** I think it's only fairly freshly printed. We're putting our hand up as high as it can be to make sure that when those positions are filled an industry representative—perhaps more than one—is on the committee.

**CHAIR:** Have other industries already got representatives on that committee?

**Mr Hancock:** As I say, I don't believe it's been formed. I may stand corrected. I imagine it will largely be Commonwealth and jurisdictions. We want to make sure that industries are represented.

**CHAIR:** Great. I understand that now. Thank you for that. It's very good news that canker has been eradicated. Can you take us through what your industry did to make sure that happened? You mentioned a little bit about lessons and what have you. Were things handled very well? Obviously we had a good outcome. What are your main lessons from that experience in the last couple of years?

**Mr Hancock:** I'd been in the job only about three or four months as the CEO—I'd been working for Citrus Australia for five or six years previous to that—and I hadn't had any training in biosecurity, but I acted on my initiative and went straight up to the Northern Territory, where the initial outbreak was. I worked very closely with the chief plant health manager at the time to establish where we could help and get out and meet with growers and talk to them about what the risks were. What we found in that response—I mentioned it in my opening statement—was that the area where the incursion happened was a very small and minor part of the overall citrus industry. Say the citrus industry is 30,000 hectares; there would be less than 150 hectares in the two areas that were affected in total. It was very, very minor. Sorry, that's probably not quite correct; it was probably 200 hectares, but still very, very minor.

We had to balance the conversation between those that were in the red zone—we'll call it that, but it wasn't called that in the incursion—or the movement control zones and also the other 28,000 hectares worth of citrus that wanted to know what was going on, because this pest could be transported through cuttings or through whole plants. There's a lot of investment involved that could have been under threat. So we had to establish something that wasn't established before, which was a stakeholder group that brought those people in to bring them up to speed on the information that could be shared. We were very involved in that. I spent a lot of time up in the incursion areas, talking to government, being part of the response team and also working with the industry more broadly.

What we were able to do was bring to a head some of the issues that were slowing the response down. We were advocating for certain directions to be taken, which evolved into a full-on investigation into where that incursion may have come from. It evolved into that national stakeholder group, which improved communications—and then



maintaining a role with the CCEPP and the NMG in terms of making decisions and communicating out to industry and my board about where we were going as signatories to the deed.

**CHAIR:** I note that in your submission one of the things that occurred, I think during this citrus canker response, was a trial of remote sensing of citrus trees in backyards and urban environments. Practically, how were they identified? What were the technologies used?

**Mr Hancock:** Given that the response happened, as we say, in an urban environment in Darwin and surrounding suburbs, the main part of the response was getting out and knocking on doors and seeing whether anyone was home: 'Can we come in and look at your plants?' That was very slow. What we were trying to do was guide where trees could be identified by using fixed-wing aircraft flying over; it wasn't satellite technology at that time.

**CHAIR:** It wasn't drones or anything?

**Mr Hancock:** No, not drones.

**CHAIR:** And just to be clear, this is the outbreak in the last couple of years.

**Mr Hancock:** Yes.

**CHAIR:** It was eradicated only last year.

**Mr Hancock:** Yes. And it had some issues, because there were no-fly zones, because there was a RAAF base nearby, and those sorts of things. But it did help centralise and focus in on where the greatest amount of citrus in backyards was possible. What we've done through our association with that work is to work with the University of New England on the tree-mapping project that they have. We're now adapting what they have with their satellite imagery and we're verifying where they have identified by using technology that that's a citrus plant. We go there and check that it is and verify that information and then take it further and say that it's actually this many trees of this variety planted in this particular year, and those sorts of things. For us, that becomes very important.

Using the example of the recent canker outbreak, it was narrowed down to just a few species of citrus that are affected. So, it wasn't all the oranges, it wasn't all the mandarins; it was particularly limes, lemons and grapefruit, from memory. If we can be very refined about how we respond then we're not going to be affecting so many people in a response. That technology is there; it's available. Part of the government's push should be to help enable industries to verify the information that the University of New England is already developing.

**CHAIR:** Are there any government agencies involved in this research?

**Mr Hancock:** I have a meeting on Monday with some of the departments that could take this up—ACLUMP, ABARES and others that are involved. We want to see investment in that space. At the moment the University of New England is limping along trying to find funding. They've had some funding from Hort Innovation and others along the way, but it's coming to a point where that project is going to run out of investment. That will be a really easy goal, to say that if we want good traceability then here's where we start: understanding where the production is. That's been something we've put into project submissions multiple times in the past few years, trying to find ways to do this ourselves. But this would be a very good outcome for the industry, if we could step into that.

We're advocating for the use of international property codes. There's a group called GS1, which is an international standard, and it has a property code already that the other property codes—PICs, they call them, generally—could feed into. It could be the overriding number that all governments could use nationally but then have their own information stored under it. If we have an outbreak where we want to try and stop all the trucks that are picking up fruit from X location, taking it to X packing shed and then taking it to Y and Z distribution centres—there are trucks that have this information on them; the properties that they're visiting would have this information on them. We could go to that level of detecting. That's the route where we need to go and do more baiting or more trapping. That's something that could be applied across most industries. I'll come back to my earlier point. Because the resourcing is so low, we can't adapt and we can't do more than just the basics, because our state governments just don't have the funding. That is what's holding it all back. Industry is moving ahead in leaps and bounds, and they can't keep up.

**CHAIR:** With this research, would the idea be to provide a catalogue of citrus trees around Australia in certain regions before an outbreak, or would it just be used in response to an outbreak?

**Mr Hancock:** We already have a written list of where they all are, but now we're connecting it to that—

**CHAIR:** Like a GIS-type system?

**Mr Hancock:** A GIS-type system, yes. That information is held by industry, and that's the important thing. Growers aren't going to want government coming knocking on the door. They don't fill out the ABARES thing because they don't want the government—

**CHAIR:** I was about to ask—

**Mr Hancock:** If the industry owns it, and owns it with an understanding of why you're sharing this information, then it has much more legs.

**CHAIR:** That was my next question. Are there privacy concerns about this data and how it's managed?

**Mr Hancock:** Yes. We have protocols around how that information is shared. Citrus is one of the pilot industries that are working with government to put this information, of all the surveillance we're doing, along with where all the orchards are, into the AUSPestCheck system. If we can get governments to invest into that and share the information with industry and not be precious about that and be worried that something might happen, we might be able to see where the gaps are in terms of where we should be doing more surveillance or they should be doing more surveillance and those sorts of things. This is live, big-data information that we could be using in conjunction with one another, but again we don't have the resources to do more than the bare minimum. Then you add in the polyphagous shot-hole borer, which is pulling in a number of states and industries. There is another outbreak in bananas at the moment—I can't remember the exact name of it. There are a range of things that are happening that are drawing the resources of both states and industry. We can't keep up. We need to find an injection of a funding to meet the obligations under the EPPRD, the obligations under IGAB. We're dragging the chain in that space.

**Senator WHISH-WILSON:** We heard earlier that bees were transferred out of being covered by Animal Health to being covered by Plant Health. Did you support that reclassification? Were you aware of that?

**Mr Hancock:** I wasn't in the role at the time, but it does make a lot of sense. I can't really comment further than that.

**Senator WHISH-WILSON:** Obviously pollination services are critical for a number of plant industry sectors. Just out of interest, are you aware of any kinds of simulations or wargaming within the industry or between agencies around a potential outbreak of varroa mite prior to it occurring?

**Mr Hancock:** I don't know the specifics but I do know that there have been a number of wargaming activities, as you say, or scenario planning conducted. In our own industry, we've done similar, and I know multiple industries, with their high-priority pests, do these wargaming activities to try and find where the issues are. The problem is implementing what we find. Plant Health Australia is often the group that oversees that in our industries, but then there's no accountability as to whether or not any of the findings get in place. It's the same with accountability to the Craik report and other reports before it. There's no accountability for adopting some of these recommendations and moving forward. I think it comes back to resourcing.

**Senator WHISH-WILSON:** You certainly made that point in your submission, under Citrus Australia, about that need for nationally consistent legislation and regulations. I want to ask you about your observations about the response. I wouldn't say it's a worst-case scenario, but we've had an outbreak now, and there's containment underway. Has it been what you've expected based on the lead-up to this?

**Mr Hancock:** Just a point of clarification: Citrus is not an affected party in this response. Through the national information that's shared and through some conversations with affected parties—the Plant Industry Forum has met once as a whole group to discuss the progress—I know that, as previous speakers have said, there are things that need to be improved, but, in general, there is confidence in what the jurisdictions are doing, particularly what the New South Wales jurisdiction is doing. Where it breaks down—and this is something that I referred to earlier—is in our preparedness work when we are not in an incursion. We should be harmonising our responses.

I watched the evidence given by the almond industry about how ridiculous it is that a line on a map and a river are supposed to stop the bees and make them turn around and go back. This is just silliness. We need to learn from what happened with COVID. We need to learn that those sorts of actions aren't helpful. In fact, they put industries offside, they put individuals offside and they don't actually have the effect that they're trying to master. But it's good for the jurisdiction to get in behind its own legislation and say, 'We're going to stop this; we're going to stop that.'

Going back to my own example of citrus canker, when the CCEPP had a technical advisory group that said, 'These are the plants that can carry citrus canker; this is the host list,' we all agreed to it. Then the SDQMA, the state and territories quarantine managers, all came up with their own host lists, and posted them all out, and they had different stops and starts as to who could carry product across borders. What is the point of having it nationally agreed in the response—this is what our host list is—if it can be turned over by the SDQMA? That work should be done with the SDQMA on all of these pests prior to that. How are we going to do that? You have

to resource it. You have to have drivers. Who is going to drive it? Industry is going to drive it, because it's really bloody important to us—excuse me—and to the truck drivers.

**Senator WHISH-WILSON:** Could I finish? I know we're going to be out of time. We're already over time.

**CHAIR:** An hour ago!

**Senator WHISH-WILSON:** Could I ask you about that point? You do stress that in your submission. You say that the plants biosecurity system is at its capacity and that the sector deals with an average of 40 exotic plant pests annually, compared to just one biosecurity concern each year for animals. You mentioned how they're under-resourced, but you also say that plant biosecurity is allocated less than one-third of valuable biosecurity funding investment. You've landed on planet politics today. Why is that? Is that because the plant based industries aren't lobbying enough or is it a value based proposition? Would an incursion in the animal based industry have a much bigger economic impact?

**Mr Hancock:** As I said earlier, our combined economic impact is 54 per cent of agricultural production, so it's not because of that. Maybe it's because under that there are so many industries and so many—

**Senator WHISH-WILSON:** Flow-on effects, multiplier effects?

**Mr Hancock:** Yes, but it's hard to get that one voice. I took over as the chair in November 2021, and my aim has been to try and bring the group together and to speak more and advocate more on behalf of us. We have such a big part to play in achieving that \$100 billion by 2030, or whichever way you want to cut it. It's meat and three veg, right? There's more horticulture than animal involved in all of this, but we don't see the corresponding proportional investment of funding.

**Senator WHISH-WILSON:** In your view, why is that the case? Is it simply politics or is it something else?

**Mr Hancock:** I think it's the disconnection between where food comes from and what's important. A national biosecurity plan is useless without an implementation plan and a budget. We've got none of those coming through. If we don't advocate and push for that, we won't see that. We've seen other reviews and plans but not the funding that needs to come behind it to make those things achievable. You can call it politics, but it's just a disconnection with how important this really is to us in our daily lives.

Let's take the citrus industry again—the huanglongbing is a real life example. In Florida, they used to produce 420 million boxes of oranges per year. It's down to 40 million boxes of oranges per year because of huanglongbing and a psyllid. That came in after a couple of other incursions. People got tired of incursions, responses and that sort of thing, and the government in Florida didn't invest in trying to eradicate that pest. It has wiped out that entire industry. They've poured so much money into trying to recover from that, but they can't do it, because it's an incurable disease. That is what our industries face, and the connection isn't being made between that and the outcome.

Could I just make one last point. We, as a plant industry, stand aghast or in admiration—I don't know which—of how much funding and noise has been made about foot-and-mouth disease, which isn't even in Australia. It's offshore, but all the pests of plants are offshore too, and we're not getting promises of funding or actual funding to put into all the responses and preparedness we need to do. Is it a political thing? Is it an awareness thing? I don't know, but, by golly, I'm here to change it.

**Senator WHISH-WILSON:** One of the, hopefully many, good things that will come out of this incursion of varroa is that the industry, especially the plant based industries, will get a lot more active in Canberra. They certainly indicated that they would. On that point, you mentioned that they're not involved in a lot of committees, but I didn't pick up exactly which ones you were referring to. Is that because they haven't been invited or that they just haven't been interested in being involved in the bureaucratic decision-making?

**Mr Hancock:** Nearly every one of the very important biosecurity committees is exclusively government. There is no representative. Sometimes Plant Health Australia or Animal Health Australia are invited as observers. So they don't represent industry and they can't make any decisions, and they can't even tell us what has been decided in those meetings. We're being held at arm's length for absolutely no reason, especially given the fact that we've been so prepared to invest our own levies in trying to make improvements. We should be working together, not being held out of the room and prevented from helping to try and drive the changes that we need.

**Senator WHISH-WILSON:** Thank you, very interesting.

**CHAIR:** Thank you very much, Senator Whish-Wilson. I thank you again, Mr Hancock, for your comprehensive evidence. We really appreciate your time.

**Proceedings suspended from 11:02 to 11:15**

**CHANDLER, Dr Greg, Research and Development Manager for Biosecurity, Horticulture Innovation Australia Ltd**

**FIFIELD, Mr Brett, Chief Executive Officer, Horticulture Innovation Australia Ltd**

**ZAMEK, Ms Ashley, Research and Development Manager for Pollination, Horticulture Innovation Australia Ltd**

**CHAIR:** We will reconvene the Senate Rural and Regional Affairs and Transport References Committee. I now welcome representatives from Horticulture Innovation Australia. I understand that information on parliamentary privilege and the protection of witnesses in giving evidence to Senate committees has been provided to you. You're welcome to make an opening statement, and then we'll go to questions.

**Mr Fifield:** Thank you for the opportunity to represent Hort Innovation here in Newcastle. We welcome the opportunity to elaborate on our submission to this very important inquiry. As you are aware, there are few bigger issues in horticulture than biosecurity and pollination. Both underpin the productivity of our \$15 billion horticulture sector here in Australia. These priorities are Australian horticulture's priorities, so biosecurity and pollination are right at the centre of Hort Innovation and our R&D agenda.

By way of background, as Australia's R&D corporation for horticulture, we deliver close to 500 projects each year and have around half a billion dollars in investments at any one time. We have investments of around \$60 million in biosecurity and another \$60 million in pollination.

For further context, we invest on behalf of 37 horticultural levy industries that we serve. Some of our investments deal with certain commodity groups, such as the development of dedicated biosecurity plans that provide a high-level overview of the threats to individual sectors, and some deal with pests that are particularly relevant to those sectors, or to just one or a few commodities. While other of our investments are particularly close to pollination, we take a cross-sector portfolio view so that pollination survives now and into the future. We aim to safeguard honey bees as our largest managed pollinator but also look to provide growers with tools in their toolbox through alternative pollinator options.

Our submission outlines our programs related to this committee's work. As an RDC in Australia we work with our fellow RDCs in things like the Plant Biosecurity Research Initiative, which allows RDCs to pool their resources and tackle common challenges to get real results for Australian growers.

When it comes to varroa mite, we have invested in the National Bee Pest Surveillance Program over the last 10 years. As you would be aware, up until now, Australia has been the last inhabited continent in the world where varroa hasn't taken hold. Varroa has always been a priority concern for the horticulture sector and, as we do with so many pest and disease threats that exist overseas, we have many initiatives that are already in place and that were in place before the outbreak. We are working with the University of Sydney to develop a world-first hormone based pesticide that's safe for honey bees and humans but fatal to varroa mite. While this program is a longer-term solution, it is one tool in the armoury we are working with industry on to deliver for growers.

We have also determined that flies are effective at pollination of crops such as avocados and mangoes—just as effective as honey bees. This represents opportunities to expand the pollination market to deliver multi-insect strategies that are fit for purpose.

Recently, with a Singaporean investment company, we also started trials of microdrones as pollinators with Western Sydney University on the outskirts of Sydney. This is helping growers in protected cropping to reduce their reliance on labour hire and increase their farming systems' overall efficiency.

On top of all this, we have a project in the pipeline that will look abroad to investigate world-best-practice methods to detect and control varroa. Currently, the methods we use to detect varroa are labour intensive—alcohol washes and sugar shakes—and, in terms of management, we are very reliant on chemicals. Therefore, this research will set us up to secure and deploy an arsenal of cutting-edge tools to help Australian horticulture.

All of our biosecurity and pollination investments—there was an attachment to our submission, listing all of our projects—align with the objectives of the National Biosecurity Strategy. While the industry shares those objectives, sustained R&D investment and the optimisation of existing biosecurity resources are required to deliver the outcomes in this strategy.

We hope that what we present to you today is helpful and insightful. We look forward to telling you about outcomes from our work from one end of Australia to the other, and we're happy to take any questions.

**CHAIR:** Thank you, Mr Fifield. I'll go to Senator Whish-Wilson.

**Senator WHISH-WILSON:** Thank you, Mr Fifield. You mentioned, obviously, the primacy of bees for pollination services across the industries you represent. This question is similar to one I asked the previous witness: have you done anything in recent years around simulations, stress testing or wargaming for a potential outbreak of varroa?

**Mr Fifield:** I'm aware that the states and the federal government have held around two simulations of exotic diseases when it comes to plants. I might pass to Ms Zamek, who's well aware of those and perhaps even participated in such events.

**Ms Zamek:** Thank you. There have been at least two varroa mite incursion simulation exercises that I'm aware of, but it's not usually in the remit of Hort Innovation. Those are usually led by Plant Health Australia.

**Senator WHISH-WILSON:** Okay. Would you have any kind of insight into the success of those kinds of simulations or how useful they are in, I suppose, giving you a level of comfort?

**Mr Fifield:** If I may answer, I guess one of the things that Hort Innovation would look for to come out of any simulation exercise is the decisions and the results of the simulation and how that might inform our prioritisation of investments on behalf of industry. If there were a gap in diagnostics and what's required there—any novel technologies that the simulation or the response threw up—we could use that information to help us decide where we invest. It also is an opportunity for us as an RDC to communicate with industry on our priorities and our investments and then pass any learnings from those simulations back to industry themselves as a conduit, if you like.

We don't have a regulatory or legislative responsibility when it comes to the biosecurity act in any of the states and territories or federally. However, having a link to the 37 levy sectors, we believe that we at Hort Innovation have a responsibility to pass on communication and also in the space of leadership and capability development and capacity, through our work in biosecurity and the \$61 million we have invested there—and we have another \$10 million in building the leaders of tomorrow for horticulture. Part of that is making sure we get industry aware, in the first place, of those simulations and where we can participate. I was hearing today that New South Wales had industry representatives in the control centre in Orange and, I think, also up at Tocal and Maitland. That is a great opportunity for industry to participate and then spread those learnings across the sector, and that's one thing that we can assist with.

**Senator WHISH-WILSON:** I suppose the follow-on question then is: is industry comfortable with the response to date that you've seen from the federal, New South Wales, Queensland and Victorian governments in relation to the outbreak?

**Mr Fifield:** I think it would be a trap for us to try and comment, as an RDC, on behalf of an industry. What I can say is that our R&D portfolio, when it comes to varroa and biosecurity, needs to be complementary of industry's priorities and also what industry sees in any response and what industry sees in preparedness. I might get Dr Chandler to explain our role in preparing for a response and educating and working with industries around their biosecurity strategic plans, which gives them confidence when it comes to responses like those we're facing now.

**Senator WHISH-WILSON:** In relation to your response, perhaps you could detail any particular things that have been learnt already, which you think industry will want more research and development into.

**Dr Chandler:** Looking at these responses, and I'll go back a bit into the scenarios and incursion exercises that we might undertake. While we don't necessarily run them, we often do fund them. Mr Hancock will be involved in one that we'll be funding through the citrus program that they're running shortly.

The avocado industry, which is less mature in that space, is setting itself up over its five-year program to do a series of cascading exercises over those five years. Because they're not so mature, you would start off with a desktop getting people familiar with being in an incursion and what their roles and responsibilities are. Then you build up, at the end, to something more akin to a war game, where you can really get into it. When we get to that stage, I like to see people sweat, because that's what happens in a real response. You're in a control centre and you're not happy. Things are going wrong and you want to find those real nasty pain points.

In terms of what industry would really want to take out of where we are at the moment, we need to identify those specific pain points and how we can fix them. And if we can't fix them, how we can all get together to bring the right information to that pain point to get through it as quickly as we possibly can. That's often the hold-up. If you're not aware of those pain points you just stop.

**Senator WHISH-WILSON:** You mentioned Citrus Australia previously, and you probably heard the evidence that was provided by the previous witness. The Plant Industries Forum Commission's submission talked about the fact that plant biosecurity nationally is allocated less than a third of annual biosecurity funding. It's at its

capacity. The sector deals with an average of 40 exotic plant pests annually. They made a comparison to animal health with one, and talked about the fact that industry often isn't included in decision-making around biosecurity. Do you have any leverage with trying to fix that situation in the way you allocate your research, or is there something you'd like to say about—

**Mr Fifield:** I can speak to the consultation that we have with industry in setting our priorities. Each and every investment that Horticulture Innovation Australia makes, comes through an advisory mechanism, even through an expert panel of industry leaders or a strategic investment panel that includes representatives from the sector including peak industry bodies. We feel like we're very close to the industry and are more successful, the closer we are to industry, to hearing their concerns, acting on them and then extending them out through the results of our R&D effort.

When it comes to a national perspective, the RDCs have the Council of Rural RDCs, which brings the 15 RDCs together. Through that forum we do have regular discussions with the Commonwealth department, and we have had interactions with Minister Watt. So I feel industry—from a horticulture perspective—has the opportunity to influence. However, as an RDC, we do not represent the industry. We're an industry services agency.

**Senator WHISH-WILSON:** You don't represent them, but would you essentially be their voice in some of these crises?

**Mr Fifield:** When it comes to prioritisation and work with Plant Health Australia, we do work closely to make sure that we are consistent with industry's interests, both in the short term and the long term.

**Senator WHISH-WILSON:** You talk about opportunities existing for enhanced use of technology—molecular biology technologies for pest identification and artificial technology to enhance surveillance activities—and increased investment into long-term research on the varroa mite. Can you give us some ideas of what that long-term research is for future responses, or even potentially the current response?

**Mr Fifield:** Listening to the evidence this morning, the actual scale and magnitude of the response in New South Wales is quite significant. If you look at the Craik report, one of the key recommendations or findings is that throwing more resources in the current way at it will be less successful than thinking more smartly about how we manage data and how we adopt ag tech in response to threats.

I'll pass to Ms Zamek to outline our portfolio and some of the projects we have in market now, seeking co-funders and investors.

**Ms Zamek:** I believe the role of Hort Innovation is to fund those blue sky research programs, those higher risk investments that might not work out. That's what we aim to do. Our work in that hormone receptor biopesticide might not work but we are confident it's worth the effort to try in that investment. In terms of other varroa mite technologies, we're really interested in integrating technology into detection and control. Varroa mite needs to be detected at a very low amount, and that's where technology can play a part; however, the confidence isn't there to uptake and trust that technology. So Hort Innovation has a role in trying to de-risk that uptake through a project.

We're also interested in anything else that comes up, from this incursion response, to look at the R&D question. What's actually missing? Is it a gap we can fill? That's where we want to see us play a role.

**CHAIR:** Senator Cadell mentioned earlier that there's work underway to make a varroa-resistant honey bee. Is that something you're working on?

**Ms Zamek:** Not currently, because overseas already have breeding programs that are well established, looking at the genetics of honey bee stock and making them resistant to varroa mite. The issue is you usually need that selective pressure present to maintain those genetics. There's no point having a varroa-sensitive hygiene stock in Australia when you don't have varroa mite. That's going to be more of a long-term solution to an endemic issue of varroa mite.

There are national programs in place. One of them is run by New South Wales DPI, through their rural R&D for-profit program. I think a lot of work needs to be done, in terms of practice change within industry, to adopt breeding standards and have people buy in queens. Only some in the industry do, from my knowledge; it's not really a standard practice, in terms of selecting genetic stock. So I think there needs to be a lot of extension work done in that area as well.

**Senator WHISH-WILSON:** You mentioned detection and surveillance in some of the work you're doing. Are you doing anything on eradication, like the use of—we've heard it's very chemical dependent. We've talked a bit about fipronil this morning. Are you doing anything, in terms of eradication?

**Ms Zamek:** We're not directly involved in the response. That is a responsibility of the emergency plant pest response team between industry and government. Hort Innovation does not have a seat at the table, so we entrust that to them, but we are always open to any R&D that comes out of that.

**Senator WHISH-WILSON:** I heard that there are some efforts underway to look at an alternative to fipronil. But, clearly, if that doesn't work on feral bee populations then the agriculture industry is in big trouble. So it's an important part of the equation.

**Mr Fifield:** Absolutely, and the effectiveness of chemical. Hort Innovation is mindful of the sustainability credentials. Part of the criticality of biosecurity is the access it provides us to international markets. Only 12 per cent of our fresh fruit and vegetables is exported, and we're seeking new market access. Consumers are becoming more selective and the supply chains are becoming more tight, so anything we can do to improve effectiveness on-farm to reduce costs, and if that means lowering chemical, that's definitely part of our portfolio. One of the projects we have in field now is a scoping study internationally to look at latest technology when it comes to varroa or emerging, and chemical will be part of that.

**Senator WHISH-WILSON:** In your submission you talk about industry engagement with international experts.

**Mr Fifield:** Correct, yes.

**Senator WHISH-WILSON:** Is that the specific case you're referring to?

**Mr Fifield:** Yes.

**Senator WHISH-WILSON:** You also talk about urban and peri-urban communities.

**Mr Fifield:** Absolutely. The threat of urban and peri-urban to horticulture is real. I guess when you hear the words 'shared sustainability' that doesn't stop at the port or the set of cattle yards, when it comes to livestock. I might get Dr Chandler to outline some of the projects we're doing or have on the horizon when it comes to peri-urban.

**Dr Chandler:** I know that the citrus industry, and Mr Hancock mentioned it in his submission earlier, are very proactive in this area. The urban and peri-urban area, let's be frank, are right around the ports. That's your first port of call for, pretty much, any pests coming into the country. It's unlikely that it's going to jump straight to your production regions. Usually, it's going to come through there. So by actively engaging those communities you're starting to build the trust with them as well. It's not just about industry and government building trust. Both sides have to build trust with the community. When push comes to shove—say, when huanglongbing comes in, the big citrus one, the first place you'll be targeting are those backyarders. You want people's trust so that you can come onto the property, inspect and possibly remove the trees depending on how that goes. So that urban and peri-urban interface is absolutely vital. The forestry industry is big on that as well, also all of our tree crops. Anything coming into a street tree, potentially, is also affecting one or more tree crops. There are a lot of these interdependencies there, and the nursery industry, which we represent, sits right in the middle of the whole lot. It's really important that we get better surveillance in those areas. And, as Mr Hancock said earlier—and it's a bugbear of mine—we don't have trust in the data we're all collecting. We should be able to have trust in that.

One of the things I have been working on in the portfolio is to drive more-stringent surveillance methods that state governments will be happy with, that DAFF will be happy with, in order to take to trading partners, and that the industry will also be happy, so that they're confident there's nothing there. That's all part of that trust network as well.

**Senator STERLE:** Mr Fifield, and your team: do you think this outbreak could have been avoided?

**Mr Fifield:** I think we can minimise the risks and threats through world-class R&D. I think the risks and threats are becoming more real, if you look at the Craik report. And as we come out of COVID I think there's a lot more awareness of the word 'biosecurity' itself. I think all disease outbreaks are avoidable and mostly occur when people don't follow proper biosecurity protocols, whether domestically or internationally. We're relying on human behaviour and there's always going to be a gap there.

**Senator STERLE:** Absolutely, but in terms of better preparedness, what would you have done? And it's not hypothetical; don't even entertain that. What would Hort have done?

**Mr Fifield:** Well, as we said, we don't have a role in it, but—

**Senator STERLE:** No, but you're allowed to have a say.

**Mr Fifield:** I think I can frame the question around what I think the priorities are for an effective response. One would be the speed with which you stop movement, which I think was done very quickly, and the speed at which you bring industry to the table to help in decision-making, and, again, I think that was done fairly quickly.

Also the speed at which you can trace is absolutely critical, and, again, I think the tracing that was undertaken was fast. The relationship between states has always come under pressure when it comes to outbreaks. As Nathan said, bees don't stop at rivers. The challenge there I think is one that is very real and is common between many of the disease outbreaks we manage.

**Senator STERLE:** I know you were in the room when the ABA was speaking, and Ms Stokes was giving her evidence. I think she brought up some very good points. She was supportive of the work by DPI but was—my words, not hers—critical of the glacial pace of training people and getting them ready. Do you have some thoughts around that?

**Mr Fifield:** Our role as an R&D organisation is around preparing capability, and we are a conduit into industry. We would be more than willing to build relationships between horticulture and the training authorities to help develop the next generation of biosecurity warriors—I think they call them warriors—for Australian horticulture.

**Senator STERLE:** The sad part about this committee is that when we get involved it's already turned to custard. That's all I'm saying.

**CHAIR:** I want to just quickly ask about AUSPestCheck, which you mentioned in your submission—that it perhaps doesn't include as much information as it could. What extra information do you want? And how can that be achieved?

**Dr Chandler:** AUSPestCheck is designed to report just the presence or absence of a pest or disease, and it's mostly used as, say, a market access tool or just freedom, if you like. In that sense, it takes in only a small dataset. What industry and governments often need is a much bigger dataset with a bit more information in there: what else did you see on the day? You might be looking for just two pests, say, but you may have picked up a bunch of other useful information while you were out in the field, and AUSPestCheck won't hold that data; you have to house that somewhere else. It wasn't designed to do that. That's not in and of itself a problem. But the lack of a centralised place to put a lot of this more general surveillance data as well as your specific surveillance data is a bit problematic, because then you've got to know where to go looking for it and who's going to house it, who's going to maintain it. So, that end of the spectrum is problematic. Again, it comes down to resourcing.

**CHAIR:** Who runs AUSPestCheck?

**Mr Fifield:** Plant Health Australia manage AUSPestCheck.

**CHAIR:** Okay. I should take it up with them. I'll do that.

**Senator WHISH-WILSON:** I have one more question.

**CHAIR:** Senator Whish-Wilson, quickly; we have to get back on time.

**Senator WHISH-WILSON:** I suppose it's in relation to this. I want to be consistent with my questioning. With other witnesses, we talked about eradication as being a big part of a major component of what we're discussing. We've also heard from previous witnesses today that, with the fipronil baiting process, which is going to be essential for knocking out feral hives, there's a slow pace in terms of rolling that out and recruiting. How do you track how successful a massive baiting program like that is going to be? How do you use these technologies to prove that feral hives are being knocked out in forestry areas or national parks? If this is going to determine whether we win or lose this fight against varroa mite, how can your technology be used in terms of that eradication program?

**Mr Fifield:** That sounds like an in-depth entomology question. I might ask one of my colleagues.

**Senator WHISH-WILSON:** Yes. While we're talking about technologies and tracing and stuff, obviously that's got to be a priority.

**Ms Zamek:** Definitely, there are technologies out there. We see drone technologies. We know their applicability with those technologies already. There is a simple way you can track bees, which is called balloon pheromoning. You send up a whole balloon full of queen pheromone, which attracts all the boys in the yard and then you can swirl them up in a blender and DNA trace how many hives are in the area. That's a common method used.

**Senator WHISH-WILSON:** Will that be used? Are you aware that DPI are going to do that kind of thing?

**Ms Zamek:** Yes. Pheromone balloons will be used because it's already a trusted piece of technology. But I wouldn't say that it's very advanced or technical; it's quite basic. As I said before, it's about the trust in technology that's missing. I had people ring me to say, 'Why aren't they using my technology?' and it's because there's no publicly available data. It hasn't been independently scrutinised, and that's what's missing.



**Senator WHISH-WILSON:** I probably shouldn't admit this on record, Chair, but I once put a European wasp in my fridge to cool it down so that I could attach some string to it and follow it at a very slow pace. I think it was mentioned that that's something Indigenous Australians might have done. It actually works to find hives, but I know it's a very labour-intensive process. I'm just interested in what technologies you might actually use.

**CHAIR:** Perhaps the most interesting evidence we've received today, Senator Whish-Wilson.

**Senator WHISH-WILSON:** I did find lots of nests over periods of time.

**CHAIR:** We've all learned something. Thank you, Senator Whish-Wilson.

**Senator WHISH-WILSON:** Perhaps I might be available to help.

**CHAIR:** We've made up a few minutes of time. Thank you very much for your evidence today, Horticulture Innovation Australia, and for your submission.

**BEER, Mr Michael, General Manager, Business Development, AgriFutures Australia [by audio link]**

**OLTHOF, Ms Amanda, Senior Manager, Levied Industries, Research, AgriFutures Australia [by audio link]**

**SMITH, Mr John, General Manager, Research, AgriFutures Australia [by audio link]**

[11:43]

**CHAIR:** I welcome representatives from AgriFutures Australia, who are all joining by teleconference. I understand that information on parliamentary privilege and the protection of witnesses giving evidence to Senate committees has been provided to you. You're welcome to make an opening statement. Thank you for your submission. After any comments you make, we'll go to questions from senators.

**Mr Beer:** Thank you for the opportunity to address this Senate reference committee and inquiry into the adequacy of Australia's biosecurity measures. I confirm our written submission from AgriFutures was submitted on 31 August.

AgriFutures Australia is the trading name for Rural Industries Research and Development Corporation. AgriFutures Australia continues to set a bold path in transforming rural industries to meet the opportunities that lie ahead within agriculture and the broader primary production sector. We invest in research and development for established industries, and we invest to accelerate the establishment and expansion of new rural industries. Our approach is to deliver results that lead to practice change on farm, with greater productivity, profitability, sustainability, capacity and wellbeing. We take a commercial approach to research and innovation and actively build strong partnerships and collaboration with industry, government and the private sector. We aim to provide a professional and respected service and to operate with boldness and agility, and we're excited and confident about the future of Australian agriculture.

The clear and unyielding mandate of AgriFutures Australia is to grow the long-term prosperity of Australian rural industries through research and innovation. In clear and simplified terms, AgriFutures Australia manages research, development and extension programs for key commodities such as honey bees, and smaller industries such as buffalo, with funds from levies and Commonwealth governments contributions to address the challenges facing those industries. In addition, AgriFutures manages research and development programs in areas such as national challenges and opportunities, global innovation, workforce and leadership. Over recent times AgriFutures Australia has commissioned research on behalf of the levy industries where biosecurity is featured and, in doing so, also on behalf of the Department of Agriculture, Forestry and Fisheries.

In our written submission to the National Biosecurity Strategy in March 2022, AgriFutures proposed a strategy, whilst taking a conservative approach, where there is the potential for changes in risk mitigation for pest and disease incursions, and there are opportunities for the use and incorporation of more advanced technologies.

You have online the AgriFutures leadership team from our research portfolio. Thank you, Chair.

**CHAIR:** Thank you very much for that, Mr Beer. I want to go to your submission first. There's a section that says we should invest more in digital infrastructure, especially to identify biosecurity threats and opportunities. We've heard a bit of evidence this morning about the perhaps less than ideal status of databases and information that is variously collected on biosecurity. Have you got any particular issues or ideas about what should be the focus of an investment in greater data collection, or the use and availability of that through the internet and digital infrastructure?

**Mr Beer:** We are in discussion with our RDC, research and development corporation, colleagues and others around more national systems for data collection. We were listening to the previous attendees; we are aware of the opportunity for the harmonisation and bringing together of data across supply chains. So, in that light, we are supporting that view of getting better at bringing our digital resources together and across the supply chain, and that would have the key benefit for application areas like biosecurity, traceability systems and other information requirements for market access.

**CHAIR:** Are you working on anything in particular at the moment, in this space, to develop these opportunities?

**Mr Beer:** Certainly, there's some commercial-in-confidence work that we are doing at the minute around that particular national digital systems approach, and the formation of the business case for that is nearing completion—so yes. There has been consultation and the formation of case studies within that business case, and that's been progressing over the past couple of years.

**CHAIR:** Okay. Turning to another issue, do bees come within your remit as such, as one of the industries under RIRDC, or AgriFutures?

**Mr Smith:** Yes, they do. The levy is the honey bee and pollination levy, and it's important to highlight that we do work very closely with Hort Innovation in that space. We have representatives that sit on our advisory panel in that area, and we also sit on advisory panels related to pollination or horticulture for Hort Innovation.

**CHAIR:** Is there a levy on honey bees and native bees as well?

**Mr Smith:** Honey bees only.

**CHAIR:** I think there has been some suggestion from previous hearings and communications I've had that the levy system doesn't capture all the value of the honey bee sector. Are you aware of these issues? If so, is there a position you have on whether or not the levy payer franchise should be expanded?

**Mr Smith:** Yes, we're aware that at the moment it's paid on kilograms of honey, and that the industry is looking at other ways of doing it—for example, the levy on pollination services, but there are issues around that in terms of being able to put a levy on a service. We understand also that there's a review into the levy process at the moment. We are aware of that because, again, we have very a strong connection to the Australian Honey Bee Industry Council, and work with them very closely in terms of understanding the issues that they are faced with generally, including biosecurity.

**CHAIR:** To clarify, would we need to change legislation to allow the levy to be collected off people providing pollination services?

**Mr Smith:** I'm not aware of the legislative requirements in that space. Michael, are you aware of that? I can take that on notice.

**CHAIR:** If you could, take that on notice. I presume this goes to the legislation that governs the mandatory collection of levies from primary producers. While I'm not aware of this particular issue you've raised, I am aware that, especially with things like the cattle industry, there are restrictions on what they can do with the levy and how it is raised, given its mandatory nature. If you could come back to us with, as I think you outlined, whether a service can be levied to collect revenues, that would be great.

In terms of the research you are doing to help beekeepers, are you doing any research right now on the management of varroa mite? We've heard some evidence this morning about potential pesticide treatments or other treatments that can be made. Is that work that you're doing? If so, what's the status of that?

**Mr Smith:** I might pass over to Amanda Olthof, our senior manager who oversees the honey bee and pollination investment program.

**Ms Olthof:** No, we're not doing any current research on the biosecurity response to varroa mite at the moment.

**CHAIR:** Given that we've heard evidence this morning that some—not all but some—believe that we will not be able to eradicate varroa mite, have you spoken to the industry yet about potential future research opportunities to help manage an endemic varroa mite situation?

**Ms Olthof:** Yes, there are some discussions about future research being undertaken at the moment. We follow the industry's advice and the government's advice, and they believe that it is possible to eradicate varroa.

**CHAIR:** I would respectfully suggest that there's at least the possibility—you would think at least a material possibility, if not a probability—that we do not eradicate it. So maybe you could take on notice, too, what steps you're taking to get prepared for such a situation and at least to kickstart this research ASAP. Is that okay?

**Ms Olthof:** Yes, certainly.

**CHAIR:** Thank you. I'll hand over to Senator Whish-Wilson.

**Senator WHISH-WILSON:** I think that's a really good question, Chair, in terms of managing risk. I want to follow up with a similar question, just in terms of eradication. I'm not sure if you listened to the evidence earlier, but one of the concerns around maybe not being able to eradicate varroa was the presence of feral honey bee hives, especially in hard-to-get-to areas like forestry areas and national parks, and that would require a fipronil baiting process. At AgriFutures, are you aware of any chemical or fipronil baiting process of this scale before, in Australia, to eradicate a pest?

**Mr Beer:** No, I'm not aware of any other large-scale process like this that has been conducted previously.

**Senator WHISH-WILSON:** You mentioned earlier that bees come under your purview. Is there any research that you are aware of into alternative eradication, or alternatives to fipronil—to poisonous baits? Is there anything you are aware of overseas that has been used as an alternative?

**Mr Beer:** No, I'm not aware of that. In terms of eradication, I'm aware that there are other hive designs, for example, that incorporate opportunities to apply an insecticide treatment into the hive and those sorts of things. But we haven't seen any of that in Australia at this point in time.

**Senator WHISH-WILSON:** I know you kind of touched on this a bit earlier, but could you walk us back. Over the last decade, how has it worked? Have industry bodies come together to say to AgriFutures: 'We see the threat of varroa mite, whether the *destructor* strain or others, as being very real. What should our research priorities be? Where are our knowledge gaps, and how do we address those?' Has a process like that occurred, for example, in the last decade, that you are aware of, in terms of a comprehensive plan for research?

**Mr Smith:** The short answer is yes. We have a very strong consultation process in the development of, for example, our industry RD&E plans. They are commonly set for a five-year period, but we also do a mid-term review of those, to understand whether the priorities are still appropriate for a particular industry. Through that consultation process, there is quite extensive consultation with industry—with the representative bodies, but also with levy-payers. For the Honey Bee and Pollination Program, we also have an advisory panel so that, whenever we do an investment call, they are also consulted, as part of that process of going: 'What is the priority for this investment call?' which happens at least annually. So there are a number of aspects. Also, the advisory panel is where our consultation happens, informally, with Horticulture Innovation. One of the previous speakers from Hort Innovation is also a member of or an observer on the advisory panel, and so is involved in those discussions. So there is a clear connection between us and industry, but also there are opportunities where there may be formal co-investment with Hort Innovation, or just to make sure that, yes, there isn't a double-up, importantly, in terms of who's doing what. So there are a number of consultation processes that we have in place across the investment program that we run.

**Senator WHISH-WILSON:** You mention in your submission that your investment would assist the agricultural industry with its ability to adapt to challenges through enhanced threat detection capabilities, risk management, process automation and operational efficiencies. We've heard from apiarists, or the bee industry, on the ground today that one of the issues that's arisen is a lack of training—that there's a lack of qualified people and a heavy reliance on volunteers to assist—in the biosecurity protocols. Is that something you've been aware of, for example, for the Cert III in NSW or the SQRT system in Victoria? Are you involved in any training or in putting together courses for development in that area?

**Mr Smith:** I might hand over to Amanda Olthof to respond to that question.

**Ms Olthof:** AgriFutures has been involved in the Australian honeybee industry via the development of a security code of practice, and various programs, but the training for anyone involved in a response is done by Plant Health Australia.

**Senator WHISH-WILSON:** I was just wondering if you had any kind of research input into that.

**Ms Olthof:** No, not that I'm aware of, but I can take that on notice.

**Senator WHISH-WILSON:** No worries, thank you. You, kind of broadly, talk about in your submission about how reactionary Australia's biosecurity systems are. I suppose flowing from that is the need to invest in more proactive or preventative work. Have you any idea on the costs to date of the response? Obviously, we've got data on compensation payouts for the euthanising of hives. Is your agency going to do any estimation of the cost of the kind of reaction that we've seen to date?

**Mr Beer:** No; we haven't been involved with it, and we haven't done any costing associated with that. It doesn't sort of sit within our remit, I guess.

**Senator WHISH-WILSON:** Okay. That might be one for the Productivity Commission or someone else.

**CHAIR:** There being no further questions, thank you very much to AgriFutures Australia for being with us today. There were a few questions taken on notice, and we're asking respectfully if you could return those answers to us by Friday 28 October.

**ANDERSON, Dr Chris, Manager, Plant Biosecurity Prevention and Preparedness and NSW Deputy Chief Plant Protection Officer, NSW Department of Primary Industries**

**HANSEN, Mr Scott, Director General, NSW Department of Primary Industries**

**TRACEY, Dr John, Deputy Director General, Biosecurity and Food Safety, NSW Department of Primary Industries**

[12:02]

**CHAIR:** I now welcome representatives of the NSW Department of Primary Industries, appearing via teleconference. You're welcome to make an opening statement if you wish, and after that we'll go questions.

**Mr Hansen:** Thanks Chair. Rather than make an opening statement, because there have been a lot of things raised over the last couple of hearings involving our response activities on varroa, we might just jump straight to a quick update on numbers and progress to date, and then we'll jump straight into questions and make the most of your time.

**CHAIR:** The update would be useful to us all, thank you, Mr Hansen.

**Mr Hansen:** I'm sorry, Senators, for not being able to be there with you in person today. We actually have a live simulation going today with New South Wales police and livestock transporters, simulating a livestock standstill in the event of an FMD outbreak here in the Central West. We've got a number of roadside stops occurring and trucks being pulled over that are part of a simulation. Police are going through the systems with us to make sure we're ready and, unfortunately, because of that, a number of us need to be here, present for today.

**CHAIR:** That's perfectly fine, and that's very relevant. We were just talking about that yesterday in Rockhampton, so we might ask you about that later. Can I just clarify, though, because we have concentrated on varroa mite here largely: do the representatives we have here today cover all types of biosecurity risk, or are you focused on varroa mite?

**Mr Hansen:** No, we cover all types of biosecurity risk. We cover any natural disaster responses as well, and, as you know, we have a couple of those in play at the moment across central New South Wales.

**CHAIR:** We might have a few questions on different topics. Mr Hansen, go to your update.

**Mr Hansen:** I might throw across to Dr Tracey, who heads up our biosecurity and food safety team, to give a quick update on where we are with our current plans.

**Dr Tracey:** Following the detection of varroa in our biosecurity surveillance hives in the Port of Newcastle on 22 June, we've been working to eradicate, as you know. To protect the honey bee industry, we immediately launched an eradication plan which restricted the movement of honey bee hives and equipment and involved the euthanasia of infected hives and all other hives within the eradication zone. That's the plan commonly referred to as the 100-day plan, and although we are now into day 112 of the response we continue to operate under the \$65 million budget approved by the national management group and according to the nationally endorsed response plan.

The DPI is in further discussion with the Consultative Committee on Emergency Plant Pests to finalise the details of the three-year program to complete the eradication process and maintain ongoing surveillance to support proof of freedom. The consultative committee includes representatives from all state and Commonwealth jurisdictions, as well as industry groups. After consultative committee approval of the three-year program plan, we'll again seek national management group approval for a cost-shared budget to carry out that program.

We are confident, based on information that we have, that we have successfully delimited the infestation, and we are continuing to work in from the edges of those areas as we euthanise the hives. As of yesterday, we have euthanised more than 75 per cent of hives in the eradication zone. That's 13,819 of the 17,538 hives in that zone. We've euthanised more than 55 per cent of cases in the eradication zone. That's 1,300 of the 2,228 cases. We've identified 100 infected premises. We've sampled more than 28,850 hives across the state, with an additional 86,569 sampled by beekeepers.

Industry has been a key part of the response—very successfully a part of that response. We've processed 1,996 movement permit declarations for 333,000 hives. Of the hives moved, we've had more than 116,000 for the purposes of pollination. That accounted for 480 declarations. During almond pollination, New South Wales authorised officers placed miticide strips in 2,075 hives of the pollination sites belonging to 95 apiarists. That's an important path for us, in terms of verification of freedom and a backup to our surveillance.

All the alcohol washes in the blue zone—that's the general emergency zone—and all those miticide strips were negative for varroa mite when examined in the lab. That not only meets our requirements under the World Health

Organization at 95 per cent confidence of proof of freedom for the general emergency zone; it meets it with over 99 per cent confidence. Importantly, euthanasia has been completed in the eradication zone, at Coffs Harbour, at Narrabri, down at Jerrys Plains, at Wards River and at Bulahdelah.

So we're working from the outside and moving in. We have developed and are implementing a wild bee management plan using the strategic application of fipronil bait stations. You've had some discussion about that so far. This is a critical step for us in the overall eradication process, and will follow the euthanasia of managed hives in affected areas.

The first area to have had bait stations deployed is the Jerrys Plains eradication zone, and that's showing very promising results. DPI teams have conducted extensive testing on the bait stations in the process of deploying them, beginning with the stations' containing only sugar syrup. Once we established that the stations were effective at recruiting honey bees and excluding other insects, we moved on to the managed deployment of bait stations containing the fipronil bait. This is a very carefully managed process approved by the APVMA. It involves the use of sugar syrup first to recruit approximately 300 honey bees, as estimated by a staff member, who then introduces a fipronil bait for a period of time before safely removing it. It's closely monitored. These operations have been conducted in partnership with the local apiary industry and the local community, who we have kept updated on each step.

The success of these operations has enabled us to proceed with preparations for wild bee management in Coffs Harbour and Denman, and we're currently recruiting additional staff to support the wider baiting program to come. Thank you.

**Senator WHISH-WILSON:** I might start on that last point about eradication with the fipronil program because, as you say, it's at a critical stage. You said it's shown promising results. Are you referring to the destruction of feral hives there? Are you able to trace the baits and the bees going from baits back to individual hives and check that they've been destroyed?

**Mr Hansen:** Is it okay if I take a minute to step you through what the infield activity actually is with the baiting at the moment to lead into that?

**Senator WHISH-WILSON:** Yes, and also just the resourcing and the extent of it, too: what's your spacing program and that kind of thing.

**Mr Hansen:** Thanks. This is obviously a really critical path for us because not only does it address the issue of the wild European honey bees but it addresses the issue of any unregistered hives or hives unknown to us within in these areas, because it will also deal with them. What we've had so far is, sort of, three phases within this. We go out into the field and we make baits available—a sugar syrup solution in the first place—to attract European honey bees. We make them available for several hours, but not overnight. We wait till we get a mass in the first instance of about 300 bees before we bait to be able to get a significant impact in that first phase. We'll do that for up to five days, then we'll give it a day's rest and then we'll go back.

The second time we come back the trigger for switching from the sugar syrup to the bait is down to 30 bees, because we expect we'll have seen an impact in terms of the number of bees around the baits. Then we'll take a day off and then we'll go back for another five-day period, then we take a day, then another five and then another five. It basically gives us a month's worth of baiting activity with day breaks in between, using the baits and the syrups as lures. Then we remove all bait stations for a month and just do surveillance. We're out there doing surveillance for that month. Then we go back and repeat what we did in phase 1 but with the lower threshold of applying the bait once we get 30 European honey bees at a bait station.

That's what we've been doing at Jerrys Plains over the last week. So far we've had success in terms of foraging wild European honey bees being attracted en masse to the baits. They have an observer there for the full period of the time during which the baiting station is operational. I think we only ran baits in there for a period of under an hour, and they were observed. We observed that because of the high presence of European honey bees there were no other bees present—no native bees—and any other animals present. The construct of the bait station is that it is raised off the ground with a barrier to stop any crawling insects from getting up onto the baiting station and a cage around it that prohibits any birds or other animals from getting access to it, and there is observation by trained professionals, which means that we're minimising the impacts on non-target species. So far we've had good success in terms of not only attraction of wild honey bees in these areas but also the impact of the fipronil baiting, in terms of dead bees.

**Senator WHISH-WILSON:** How many bait stations have you put out and how many people have you got working on this?

**Mr Hansen:** I might see whether we can get that number for you. I don't have it immediately ready to hand, but the bait stations—

**Senator WHISH-WILSON:** Are we talking about dozens?

**Mr Hansen:** in Jerrys Plains, we space them out with three-kilometre spacings in a radius out away from the infected premises, but keeping within two kilometres from the border of that red zone. I think there are 19 bait stations in each of the eradication zones, and we're doubling that up in the Coffs one, because—and you would have heard earlier, from Steve—we're going to try to really blast that Coffs area and see if we can't get some surety about bee movements back there in March or April next year.

**Senator WHISH-WILSON:** So, you're going to double the bait stations you've got in Coffs, but will that be it? Will you need more resourcing? And where are you finding the personnel to do these? Is it contracting services or internal within DPI? Or are you relying on trained volunteers?

**Mr Hansen:** At the moment we're relying on staff from across DPI, local land services, the National Parks and Wildlife Service, the EPA and RFS as part of our suite of New South Wales government employees, with the fipronil baiting, and at the moment we're largely relying on staff in our invasive species team who have expertise and experience in dealing with these baits in a natural environment. But as we scale that out—and this is the first one that's been done at a scale of this size for bees—we have had success with fipronil in other responses, such as with yellow crazy ants around Lismore. But this is the first time it's been done on this scale for bees. So, everything from the design of the actual unit of the bait stations all the way through to the cycle of baiting and attraction have all needed to be refined and done on the run as we do it. Hence we've got the technical experts conducting it at the moment, and it is in the process of being scaled up, provided that we can get some dry weather to be able to get out there in the field.

**Senator WHISH-WILSON:** Thank you. I have just one last technical question on this, before my one last set of questions. We heard today that honey bees, if they're under pressure, can travel up to 15 kilometres. Are you confident with the feral hives that your eradication zones are tight enough to prohibit hives that might be on that borderline, especially in forest areas, national parks and heavily wooded areas?

**Mr Hansen:** That 15 kilometres would be an exceptional outcome from a bee's movement. But we're working to the nationally and internationally agreed standards in terms of eradication zones around infected premises. What gives us confidence that those numbers are still relevant and still valid is the fact that we've done surveillance in all the purple zones around each of these areas. They are the surveillance zones, so they're the buffer we've been using to make sure we do have it right in terms of where that delineation between eradication and the general biosecurity zones is. We've been doing surveillance in those. And you would have heard from the opening comments that after almost 100,000 tests across hives we still don't have any positives outside of our currently identified eradication zones. So we don't know what we don't know on this one. But what we do know is that we've tested and done our surveillance across all those purple ones, and we're comfortable that we've got the circle set at the right distance from the infected premises.

**Senator WHISH-WILSON:** Thank you. The other variable we heard about today which could introduce uncertainty as to whether eradication will work is compliance within, let's just say, the beekeeping industry or the honey industry. We heard today that there have been 31 infringement notices issued by DPI for lack of compliance. Can you update the committee on whether you'll prosecute anyone? What kind of evidence do you have in relation to lack of compliance and the movement of hives? You may have heard the evidence today: there was a suggestion that maybe the will is not there to see through prosecution of people who may not have been compliant.

**Mr Hansen:** We will definitely be following through on the compliance pieces. All the penalty infringement notices that have been issued so far—be those for moving hives or supers; failing to notify location of hives; failing to comply with codes of practice for recordkeeping of disease checks; or whether it's contravening mandatory measures by failing to identify where their hives are—are all being followed through. We do have a number of instances that are still under investigation at the moment which may go beyond penalty infringement notices, but they would be too early for us to comment on—or it would be inappropriate for us to comment on them—publicly for fear of jeopardising our investigations on that front.

One of the greater penalties is the fact—as I think you've also heard in evidence today—that contravening an emergency order is also actually grounds for us discounting them from the compensation payments that are available under this national response. That would probably end up a significantly greater expense for commercial beekeepers than what the penalty infringement notices are.

**Senator WHISH-WILSON:** Are you sharing that information with the Commonwealth government, which is paying those compensation payments?

**Mr Hansen:** The information is shared with any of our fellow jurisdictions who ask for it. It's not something that we regularly report in detail, long term. But if they wanted access to that we'd be more than happy to provide it.

**Senator WHISH-WILSON:** I just want to be clear about this, because my understanding of the evidence given earlier was that if you're in contravention of, let's say, regulations, or you're responsible for the outbreak, then you're not able to be compensated. But if the agencies are paying out compensation to people who may be in that category that you're investigating then how would they know, if you haven't given them that information?

**Mr Hansen:** We provide a report back on the compensation that's being paid, and the numbers. And in the same way that we don't provide details on each recipient, as to their meeting eligibility or not, we provide a summary of how many beekeepers haven't met eligibility requirements. We've been making that available to parties to the deed, if they request it. And one of those eligibility requirements is actually compliance with emergency orders and with the Biosecurity Act.

**Senator WHISH-WILSON:** Okay. In terms of the ultimate question of what the origin of the outbreak was—what the vector was—obviously, there are different theories. I know you're doing work on the genetic studies of the varroa and where they may have come from. How close are you to actually getting that information? I know it's very complex—genetically, it's very complex.

**Mr Hansen:** Yes. I might give you the uncomplex answer and then hand over to those who have more details. But the uncomplex answer is that the genetic sequencing really just told us that there wasn't anything special or unique about the genetic makeup of this varroa mite that would allow us to target it to any one area. It was a pretty common genetic sequence that you'd find in a number of outbreaks around the globe. What that sequencing has allowed us to do is to confirm that we are just dealing with one outbreak, not multiple outbreaks or multiple incursions. There's a similarity in the genetic sequencing that gives us some confidence around that. In terms of how it came in, due to the prevalence of mites and the level of infestation, we have a good idea about the geographical area in which it first found a managed hive. But I'm not sure how much work we would have to do nor whether we will ever get to the underlying question of: how did it actually make it from whatever vessel or from whatever location onto the mainland? To be honest, we're at a point where we're making sure our resources are going to eradicating hives—eradicating managed hives, eradicating wild hives—and keeping the surveillance up. So my short answer is: I'm not sure we're ever going to get a definitive answer for you on that one, but I might hand over to Dr Anderson, who might have some additional information.

**Senator WHISH-WILSON:** Could I just ask a question in relation to that? I understand why you'd be focusing your resources on eradication, but, from our point of view, the federal government has biosecurity jurisdiction over ports, airports, cargo ports—the kinds of vectors we've seen in the past. Are you investigating the potential for this to have come into the country via someone bringing in stock through an airport or through mail? Are you investigating something as simple as that?

**Mr Hansen:** I might hand over to Dr Anderson. As I said, our responsibility is to pick up and deliver the eradication plan once that border security has been breached. I'm not sure what investigations the Commonwealth are undertaking surrounding: how did the border get breached? I know we can point them to where we think the first managed hive locations are. That doesn't necessarily mean the first hives that were infected, because there could well be wild hives that were the original source point. But we can certainly point to where we think the first managed hives were and where to spread out from there. The positive thing for us is, with the exception of the first three or four properties, which were all basically contiguous, all remaining infections have actually been the result of movement of either materials or bees. But I might see if Dr Anderson has anything further he wants to add on that.

**Senator WHISH-WILSON:** Before we go to Dr Anderson, I have a point for clarification. Are you saying it's the Commonwealth's responsibility to investigate and prosecute someone—like an individual beekeeper, for example—who might have been behind the original outbreak if protocols weren't followed or biosecurity protocols were broken? Are you saying it's the Commonwealth that are investigating that?

**Mr Hansen:** I'm saying that the response plan for which we have responsibility goes to the start, to the point of: 'We have a detection in the state. How do we delimit the extent of that infection, stop its spread and then eradicate it?'



**Senator WHISH-WILSON:** I've already heard what you've said. I'm just asking: are you saying that it's your understanding that it's the Commonwealth's responsibility, not DPI's, to investigate if there was a breach of biosecurity protocols?

**Mr Hansen:** We certainly wouldn't be investigating, for example, whether all the quarantine requirements at airports, within national ports, were being met. That would be the responsibility of those who have control over that space, which would be the Commonwealth.

**Senator WHISH-WILSON:** That's for ports, airports and other vectors. But, for individuals importing genetic material through the mail, would that be a state responsibility?

**Mr Hansen:** That mail still comes in via either ship or plane, so it's still through ports or airports, so it's still with the Commonwealth's responsibilities.

**CHAIR:** Thank you, Senator Whish-Wilson. I'll go to Senator Sterle.

**Senator STERLE:** I want to put this question to you, Mr Hansen, and the doctors—whoever wants to answer. But I'm going to play a game here. It's either yes, no or pass, please, because we're running out of time. If there were a large-scale outbreak across thousands of sites, would you cope?

**Mr Hansen:** Outbreak of what, sorry? I can't just say yes, no or pass, sorry.

**Senator STERLE:** Let's just pluck something out of midair, like varroa mite, shall we?

**Mr Hansen:** In which case, yes, we'd cope.

**Senator STERLE:** That's a yes. Okay. That's fine. If there were a large-scale incursion, would you have the workforce capability required to operate effectively?

**Mr Hansen:** Yes.

**Senator STERLE:** Very good. How much does it cost to do the BERT course at—is it Tocumwal, the university?

**Mr Hansen:** Tocal ag college, just up the road. The BERT course is about \$600. Sorry; I'm going to have to get away from a yes, no or pass. It's \$680, the answer.

**Senator STERLE:** Very good. But I've just run out of steam, because, I tell you what, this has been very painful. Thank you, Chair. I've had enough of this session.

**CHAIR:** I've just got a few questions, and hopefully we'll wrap up for lunch then. Earlier we heard evidence that the New South Wales department did not have a workable database of people with expertise in the beekeeping industry and that there has to be some assistance from amateur beekeepers there. Is that the case? Was there a lack of contact details to be able to get onto people to help in response to the varroa mite outbreak?

**Mr Hansen:** I heard some evidence given earlier. Just for the record, the response actually stood up on 23 June. I'm sure you've heard that plenty of times. The first of July was the first day that we had volunteer beekeepers in the response, helping us out in the field. By 4 July, we had 24 volunteer beekeepers out in the field assisting us, and that continued to escalate from there, to the point where we've had 283 involved to date. All of those volunteer beekeepers were covered by Treasury funds management, in terms of insurance. So there were no issues around insurance, as might have been flagged previously. Some of those beekeepers came via organisations and associations; some came straight to us.

To your question, we had a database of available people. In fact, DPI has relied heavily on being able to draw from across the New South Wales Public Service, across industry and across beekeepers, both professional and amateur, to assist us in this response—as we would look to do across any response. We're 2½ thousand people. Our exercise today on foot-and-mouth disease involves livestock transporters and the New South Wales police, who have a 16,000-strong workforce out there. We've used the Rural Fire Service as a key supporter. In fact, they've, at times, supplied over half of the staff—largely because a lot of the eradication efforts occur at night-time. In the current conditions we've been having across the state—which are somewhat different from some other parts of the country—it's been wet and slippery, it's been at night-time, it's been in paddocks and in yards. And so we have had to make sure that people are both fit and able to do the job that's required. So we do rely on volunteers and we rely on volunteers not just from within the NSW Public Service coming out of their usual jobs to assist us in response but also from within industry and the community.

**CHAIR:** That didn't quite get to my question, but that's okay. I'm going to move on. If you did hear the evidence earlier, you might have heard that there was a suggestion that there were barriers to volunteers helping and assisting—in particular, an issue of whether any volunteers would be insured. Was that ever a problem? Did

your department or the New South Wales government have a bar on people helping in that initial response because of a lack of insurance?

**Mr Hansen:** Not that I'm aware of, and I know our Treasury has underwritten insurance for all volunteer participants. Anyone who appears on our formal roster as being rostered onto the response is covered by the New South Wales government's insurance policy, and that's been the case since 1 July, when we had the first four volunteers join our response.

**CHAIR:** That includes volunteers? They're covered by that policy?

**Mr Hansen:** Yes.

**CHAIR:** There's also been a suggestion that there's been a lack of trained people with the skills to help inspect sentinel hives and do other things that could help combat varroa mite. In particular, there was a reference to a BERT scheme with more resources. Apparently more amateur beekeepers could be trained up to have the skills necessary to respond. Are you aware of those issues? Are there any steps being taken to expand the number of trained people that are able to assist and help in this response?

**Mr Hansen:** There are, and I'll get Dr Anderson to make some comments on the BERT program.

**Dr Anderson:** Thank you very much. The BERT program was an initiative of New South Wales DPI. Prior to our development of that program, which takes a bit of time to get nationally assessed and approved, we didn't have a training program like that in New South Wales but we'd identified the need for it.

We got the pilot for that program—the pilot within which we trained a number of beekeepers but also trained a number of our internal staff—in December 2020. At that time, the world was melting down because of COVID, and that had an impact on our ability to conduct face-to-face training. We ran the first cohort of beekeepers, through that program, in February 2022. We trained a number of beekeepers, and all of the beekeepers that were trained under that program, bar one or two, have participated in the response without issue. We also provided trainer training to Western Australia, because they had seen the success of our program and wished to implement it in Western Australia. So we have been to WA and trained these Western Australians in the rollout of the BERT program.

This is a relatively recent initiative. It's not something that's been going on for many years; hence we are still in the process of ramping that up. But with COVID and then the detection of varroa that's had an impact on our ability to deliver that training.

**CHAIR:** I want to move on to some foot-and-mouth stuff. I'll be quick, as we are running behind time. You mentioned you're doing a simulation today. As I mentioned earlier, that's something that was discussed yesterday. Can you give us some more details of this simulation? Is it just being done with the New South Wales government? It sounds like it's involving other agencies, rather than just yourselves.

**Mr Hansen:** That's right. It's us and New South Wales police but also Local Land Services, EPA and a number of other frontline agencies within New South Wales. It's just New South Wales because, again, with FMD, unless the outbreak is in multiple states, the state in which the incursion occurs will be the lead agency, and we want to make sure that we've got all of the agencies within New South Wales prepared and ready to go.

**CHAIR:** Have there been or are there any plans to do a national simulation of an FMD outbreak?

**Mr Hansen:** There are, and there have been ones in previous years, but I think there's also one scheduled for either later this year or early next year that the Commonwealth are talking about.

**CHAIR:** With the simulation you're doing, are you also using or querying—I should say probably querying—the NLIS database to test its robustness to a surge in inquiries?

**Mr Hansen:** We'll be testing it to the degree that we can. Today's simulations will be about what evidence a police officer can ask for or should expect to be able to get from a livestock transporter, in terms of movement of animals. It'll be their ability to fast track a query through both NVDs and NLIS to see if they can get answers and validate information that they've been provided with and what systems we have given them access to, from within DPI. We collect a lot of data on all farms across New South Wales when we have biosecurity incursions or information through the rate payments and so forth about how many livestock there are on what property and where, kind of thing, and who the owners are. So they are interrogating, in live time today, all of those databases to see what works, what doesn't work and what can be expected.

**CHAIR:** Great. Finally, we heard evidence from the livestock transport sector yesterday and they're very keen to understand any implications of a 72-hour standstill and other impacts. Are they involved, in this simulation, either as an industry or at least in terms of the scenarios and what the impact on them would be?

**Mr Hansen:** We have a number of livestock transporters involved today. They're not as an association but they're there as private transport companies from around here. We do have transporters, livestock agents and saleyards involved in a working group with us at the moment. They're involved in regular debriefs and information. Today's exercise, however, just involves a number of their members, as opposed to them as an association.

**CHAIR:** Alright, thank you very much for that. Senator Whish-Wilson has some questions, and Senator Colbeck has just arrived. He had some flight issues, but he may ask some questions at the end, as well.

**Senator WHISH-WILSON:** I have a couple of quick questions, gentlemen. We've heard evidence broadly that Australia's biosecurity system is very reactionary. In that context, will DPI be doing some kind of estimate as to the total cost of this response? We obviously had the data around the federal compensation for eradication of hives, but will there be data available as to what this has cost DPI or the New South Wales government so far?

**Mr Hansen:** We'll have the data on both what it's cost us and what it's cost collectively over the response. There will be two figures because there are a number of costs that we wear that aren't actually sharable across the deed response—so just the costs that New South Wales taxpayers wear and that our Treasury support us with. We'll have both of those available. Again, the three-year plan that we'll be transitioning to will include the cost of that three-year phase, and that's going to be important for us in getting that proof of freedom. Those costs will also include costs that only we will wear, versus costs that are able to be shared across the industries and other jurisdictions that they agree to. But those costs are all available.

The underlying piece for us is running that against the cost-benefit of the fact that we know, from international experience, the cost of living with varroa for our managed hives. I think you've heard the evidence about what it does to the unmanaged hives, but, nationally, there are about 600,000 managed hives. That's about \$54 million a year in costs to beekeepers in terms of living with varroa. In New South Wales, there are about 300,000 of those 600,000 hives, so it's about \$27 million a year for us in additional costs to beekeepers. That doesn't start to try to apportion the \$14 billion per year of horticulture pollination that would be impacted as well. So, at the moment, we're—

**Senator WHISH-WILSON:** I imagine it's going to be a very big, important exercise for us all to do, but I don't suppose you've got any cost estimates to date that you could share with us?

**Mr Hansen:** At the moment, I believe we're estimating that, by the end of the hundred days worth of activities or by the end of the activities that are captured in what's described as the hundred-day plan, that will probably come out to about \$10 million under what the original budget was. The original budget was about \$63 million, and I think we're forecasting that it'll be between \$52 million and \$54 million. In terms of what the cost-share costs are for everyone, that doesn't pick up the individual, direct costs for New South Wales over and above.

**Senator WHISH-WILSON:** Thank you. There's another context for this question. Obviously, it's been pretty well accepted that you guys have done a great job across the board, given the extent of this outbreak and what's involved. But one of the criticisms that has been raised by stakeholders is that your registration process for amateur beekeepers or professional beekeepers is sometimes quite complex. These associations have been trying to work with DPI for a number of years to make it easier. Do you have any comments to make about that? That, of course, has hamstrung some of the response, because the databases haven't been that great.

**Mr Hansen:** The short answer is, yes, we have been hearing, we will be taking it on board and we will be looking into how to improve it. We do need to unpack it a little bit, and I'm sorry to use that phrase, but it's a case of some people saying we're making it hard and what they're really saying is that we should just make it free, as occurs in some states. Not all states do that, but some states do. There has been an active debate, within the state and the industry and with us, for the last couple of years, about whether we should just make registration free to encourage more people to register. If people have to pay for something, even if it's only a token of like \$40 or \$50 for a three-year period, do they value it more and treat it more seriously than if it's just a free process?

We will be sitting down with the industry to make sure that that registration process does evolve, because we've heard the messages and we know how clunky it can be at the moment, especially for those who are trying to do it with paper based forms. But, at the same time, there are a lot of parts to what people mean when they say it's difficult or doesn't help people to get involved.

**Senator WHISH-WILSON:** Okay. Thank you. This is the last question from me. It's in relation to what I asked earlier, so I might ask it a different way. Is DPI or the New South Wales government assisting any Commonwealth agency with investigating the potential outbreak of varroa mite? Have you shared any information with the Commonwealth agencies in regard to that?

**Dr Anderson:** Yes, we have had some discussions with the Commonwealth on that.

**Senator WHISH-WILSON:** On the particular issue that I raised earlier?

**Dr Anderson:** Yes, about point of entry.

**Senator WHISH-WILSON:** Okay. Thank you.

**Senator COLBECK:** I might have a look at the transcripts, Chair, and put some questions on notice so that the witnesses can give them some thought. Some of the things that I was looking at go to the issues that Senator Whish-Wilson was just talking about, which is the availability of data, inconsistency across states and things of that nature. So it may be that I draft some questions for all of the witnesses this morning after having a look at the transcripts because that will save us some time now.

**CHAIR:** Once again, I thank representatives from the New South Wales Department of Primary Industries. If there are any questions on notice, could you get the answers back to us by Friday 20 October. Obviously Senator Colbeck has just indicated that he might send you some.

**Proceedings suspended from 12:46 to 13:30**

**CROFT, Ms Lisa, Chief Executive Officer, Australian Pesticides and Veterinary Medicines Authority**

**LOGAN, Dr Sheila, Executive Director, Risk Assessment Capability, Australian Pesticides and Veterinary Medicines Authority**

**LUTZE, Dr Jason, Deputy Chief Executive Officer, Australian Pesticides and Veterinary Medicines Authority [by audio link]**

**TRAINER, Dr Maria, Acting Executive Director, Registration Management, Australian Pesticides and Veterinary Medicines Authority [by audio link]**

**CHAIR:** We will reconvene this hearing of the Senate Rural and Regional Affairs and Transport References Committee. I welcome to the table representatives from the Australian Pesticides and Veterinary Medicines Authority. I believe that information on parliamentary privilege and the protection of witnesses has been provided to you. Do you have anything to add about the capacity in which you appear today?

**Dr Logan:** I am the Executive Director of Risk Assessment and Capability at the APVMA.

**CHAIR:** Thank you, and thank you for your submission. You do have the opportunity to make an opening statement, if you wish, and then we'll go to questions.

**Ms Croft:** We're fine just to go straight to questions, thank you.

**CHAIR:** Thank you very much. I'll kick off. Maybe you could explain this? On first reading of your submission I wasn't too sure what your involvement would be on things like foot-and-mouth disease, varroa mite and other issues. But upon reading it, it became clear that, yes, you do have a role in approving certain treatments or chemicals in response. Could you give us an update on the varroa mite outbreak particularly, which is here and now. Is there an active program in terms of looking at potential chemicals that could be used to help manage this disease and, if so, what the status of that is?

**Ms Croft:** We had already approved, before the outbreak, two registered products for control of varroa mite. And since the incursion we have also approved nine emergency-use permits. Those emergency-use permits cover both the surveillance and the detection of varroa mite, as well as, obviously, measures to control varroa mite.

**CHAIR:** Are there any others that might be coming onto that list that are being assessed right now, or is that the extent—

**Senator WHISH-WILSON:** Sorry—and can you tell us what they are?

**CHAIR:** Sorry, let's do that first. Give us the details of those—did you say it was eight?

**Senator WHISH-WILSON:** Are you talking about fipronil here, for example?

**Ms Croft:** Yes. In our submission to the inquiry we've listed both the registered products and the permits. There's a gel and beehive strips specifically in terms of the registered products that are for the eradication. We had approved those, as I said, before the incursion, but they could only be put into use following a declaration by the Commonwealth Chief Plant Protection Officer. We can approve them in advance so that they're ready, but they can't then be used in the field without a declaration by the Chief Plant Protection Officer.

**Senator WHISH-WILSON:** Sorry, can I just ask about that point, if you don't mind me interrupting?

**Ms Croft:** Yes.

**Senator WHISH-WILSON:** The declaration would relate, for example, to how they can only be used with a sugar solution. You approved the use of fipronil, but it obviously comes with conditions in the way it's used. Are you also responsible for outlining what those conditions are, or for stipulating that?

**Ms Croft:** Yes, and that would be a standard part of our permit application process. We would have conditions for use, particularly where registered products are being used in a way that is not currently on the label, or where unregistered products are being approved for this particular use. Our permit has a conditions section, and anything that specific would be in there.

**Senator WHISH-WILSON:** With fipronil, are you aware of any trial or program similar to this before in Australia, in terms of scale and the way it's being rolled out? Are we in uncharted territory, or has it been used for similar things?

**Ms Croft:** Dr Lutze, you might take that question.

**Dr Logan:** I think he may have had some trouble hearing that. My understanding is that, in terms of an eradication program to eradicate a new incursion, this would be the largest extent that we've had to date. However, we look at the assessment of the substances up to how they're used and make those recommendations:

'If you use it in accordance with these instructions under the permit, it will achieve this result.' For example, the fipronil products used to wipe out beehives are going to do that if they're used in accordance with the permit. That feeds into overall eradication plans, which are under the control, obviously, of DPI in this case.

**Ms Croft:** It is important to note, in the case of fipronil, that it is a registered product for a whole range of pests and diseases, and it's been in the marketplace for a long time. So, for an eradication program like this of varroa mite, yes, but it has been in use for a long time, for a wide variety of pests and diseases.

**Senator WHISH-WILSON:** In Tasmania, for example, you have to go through our version of DPI there to get access to it. It's not something you can buy commercially. Is that the case in other states?

**Dr Logan:** The permits for this particular control have been primarily issued to DPI, so they have control of how those products are used under permit.

**Senator WHISH-WILSON:** Are there any alternative products on the market that you're aware of that could be used instead of fipronil? Has anyone sought any access or any permission, should I say? 'Permission' is not right.

**Ms Croft:** There are three categories of products that are available for eradication. It's fipronil, petrol and permethrin.

**Dr Logan:** Yes. Depending on the situation in which you're trying to look at controlling a hive, you have different options, which have now been consolidated under a single permit with relevant conditions which are different for fipronil, for permethrin and for, essentially, petrol.

**Senator WHISH-WILSON:** Could you talk us through the differences? I'm not familiar with the other two you just mentioned. Could you say the third one again?

**Ms Croft:** Permethrin.

**Dr Logan:** Permethrin.

**Senator WHISH-WILSON:** Oh, okay. Yes, sorry. I am familiar with that. It's a kind of natural one. Has DPI sought permits to use those?

**Ms Croft:** While Dr Logan's just responding to that, I will say that the permits are to Plant Health Australia, DPI and also the Victorian Department of Jobs, Precincts and Regions. Depending on the nature of the permit—and there's also one for the Department of Agriculture, Fisheries and Forestry.

**Dr Logan:** I might need to ask Dr Trainer to answer on the specific conditions of the permethrin eradication permit, or we could take that on notice.

**Senator WHISH-WILSON:** Permethrin is a naturally occurring insecticide—correct? Maybe I've got my wires crossed, which is quite possible.

**Ms Croft:** Dr Trainer, can I just check: have you heard that question?

**Dr Trainer:** I heard the first half, I think. The question was whether permethrin is a naturally occurring insecticide, and that is correct. There are forms that are naturally occurring.

**Senator WHISH-WILSON:** Is there a reason that's not being used, for example? Is it because it's not effective in being taken back by bees to their swarms? Is there a reason that it is not being used, or is just that we haven't used it for this kind of program before?

**Dr Trainer:** I think it's the latter. I think we'd have to take that on notice to see if we've had any discussions around permethrin or other chemistries that aren't currently approved under permit for this use.

**Senator WHISH-WILSON:** Thank you. Obviously, it's critical to eradicate varroa mite, but the use of this much poison is a very sensitive issue, especially in national parks, so I'd just be interested if you could give us some information on other alternatives on the market and whether DPI or others have sought to use those.

**Ms Croft:** It is an interesting point, because obviously we assess what is brought to us, so we're not out there determining what we think should come to us; we assess an application as it's brought to us by state governments or other parties. But we will certainly take that question on notice in terms of the interest in using an alternative.

**Senator WHISH-WILSON:** Yes. If they have permission to use others or they're looking at alternatives, I'd be very interested in that.

**Ms Croft:** Yes, certainly.

**Senator WHISH-WILSON:** Thanks for that.

**CHAIR:** Thank you, Senator Whish-Wilson. We'll go to Senator Colbeck.

**Senator COLBECK:** Thanks, Chair. Each of the three registered products are already in the markets locally, but, effectively, what we're talking about in this circumstance is an off-label use, for which a particular approval has been sought?

**Ms Croft:** There are two registered products, which are the beehive gel and strips. They are registered. The others are approved under permits. That can be either an existing registered product used in a different way, per the suggestion you're making there, or a product that's not currently registered at all but is approved for this use.

**Senator COLBECK:** So the fipronil, as I understand it, is being laid out as baits, and that's being carried back to the hives to, effectively, exterminate the entire hive and, with it, the varroa. That's the methodology for eradication of varroa using the fipronil?

**Dr Logan:** Yes. The fipronil use is to actually wipe out the hive in an infected area. That's where there's the pre-baiting, to detect that bees are actively foraging at the bait, and then the treatment with fipronil, which is then carried back to the hive.

**Senator COLBECK:** Okay. So the process of monitoring the baits and the insect cohorts that might be attending it—this goes to the point that Senator Whish-Wilson was making—would be undertaken and monitored by who?

**Ms Croft:** The permit holders.

**Senator COLBECK:** It's the permit holders and, from what you've said, in the circumstance we're talking about, the respective state governments who are managing those programs.

**Ms Croft:** Or Plant Health Australia, yes.

**Senator COLBECK:** Okay. Is the data that you're using for the approvals the existing data provided to you through the application process? How is that looked at in the context of overseas experience with relation to the use in this methodology?

**Ms Croft:** Regardless of whether we're approving something under permit or a full product registration, we still do the same assessment in terms of our statutory criteria. It must meet the safety criteria, which is for people, animals and the environment; it must meet the efficacy criteria, which means we must be sure that it will actually work as intended; and it must satisfy the trade criteria, which means we have to be sure that it won't unduly prejudice trade between Australia and another country. So it's the same assessment. When we're doing a permit application, for example, for a product that's already registered, we already have quite a wealth of data within the agency in relation to those products. Doing an assessment that asks, 'Can it be used for this purpose?' when we may have already assessed it for a variety of other purposes is a much quicker and more simplified process. Certainly, as we do on a whole range of things, we take into account the best available science of anywhere in the world. Our people do a lot of work in the international space to stay aligned with or attuned to where international regulators are and what's at the forefront of the scientific fields.

**Senator COLBECK:** That would take into account—this is moving on a little bit; let's hope we don't get to this point—the possibility of residues from varroa-specific treatments being in the honey, for example, and ensuring that they would meet the respective MRLs?

**Ms Croft:** Yes. Certainly with fipronil—but equally with the two registered products—one of our considerations is the trade consideration I was talking about. We would have assessed that it will not prejudice trade. We have determined, particularly for the two registered products, that there's no trade risk associated with the product in the honey and it's safe for human consumption.

**Senator COLBECK:** That would go back to the purpose of the use, which is to, effectively, euthanise the hive.

**Ms Croft:** Yes.

**Senator COLBECK:** Are there any restrictions on what's in the hives, for example? As part of the permit conditions—we're really looking at feral hives and wild hives as much as anything else in what we're trying to achieve here—in the context of commercial hives, are there any restrictions on being able to utilise the residual honey, for example, in the hives, because it does go to that market point?

**Dr Logan:** We have two aspects. The first one, which Lisa Croft was referring to, is the registered products, which are designed specifically to control the varroa mite within the hive—

**Senator COLBECK:** Yes, I understand that.

**Dr Logan:** without eradicating the bees. And, for those, we've had a very detailed—

**Senator COLBECK:** Which is a different category, and there's a pretty well-understood market for those, given the prevalence of varroa in other jurisdictions.

**Dr Logan:** That's correct. We did do a trade consultation on, particularly, the Apivar product, which contains amitraz, to test the market appetite for honey having safe levels of amitraz, and we're now going through the process of establishing an entry for amitraz residues in honey, should the thing continue to need to be used. In relation to the use of fipronil and the other products for eradication, it is a condition that all hive products, including honey and wax, must be destroyed, must not be put to human use and cannot be made available for sale or export. Killing the bees is one thing, but the prime purpose of, unfortunately, euthanising the bees is actually to eradicate the varroa mite, so that is a permit condition.

**Ms Croft:** For the registered products, we do what's called a trade advice notice. Where there might be considerations like this that we need to take into account, we do quite an extensive trade consultation process before registered products are approved.

**Senator COLBECK:** Who would you consult with in relation to those issues? Would it be FSANZ in relation to MRLs and Foreign Affairs and Trade in respect of potential trade implications, or do you have some standing sources of data that would provide you with that information?

**Ms Croft:** It would be both government agencies, but also affected industries. When we do the trade consultation, it is really either the grower groups or the groups that are supplying the product overseas that will be the ones most consulted as part of the trade advice notice process. Dr Logan, do you have more?

**Dr Logan:** It is a public consultation process. We take care when we publish the trade advice notice, which is published on our website, that we reach out to affected industries to ensure we get their feedback. We have a process, working through FSANZ, the food safety authority, to establish entries in the Food Standards Code. That also includes a consultation process in relation to the World Trade Organization provisions prior to an MRL being established for use in Australia. For this particular product, the Apivar product, as it was being registered as a shelf registration, we undertook the trade consultation process prior to registration, but we have gone through the process of formally establishing the MRL after the time of incursion, noting that, with the current eradication and proposed use for Apivar, we're unlikely to have any residues appearing in the next period of time.

**Senator COLBECK:** It's pleasing to hear that there's appropriate consultation with industry, because they certainly value the fact that their product, in the global market, doesn't have those residues, because we don't have varroa and we don't have to treat for it. They see that as a market advantage, so that's appropriate. I suppose I was looking at some of the more technical elements. You talked about establishing an MRL. Where does the advice come from for that? There are, obviously, international protocols around a lot of those, but Australia's MRLs aren't necessarily always the same as the international ones. So what's the process you deal with there and the consultation with, I'm presuming, FSANZ in relation to that?

**Dr Logan:** As part of our assessment of the statutory criteria of safety, we include the assessment that a product will not be harmful to anyone exposed to residues of the product. We have, within the APVMA, the responsibility for our residues and trade section to examine submitted data and to look at an appropriate MRL in accordance with the use approved in Australia. We have the legislative responsibility to establish, through our MRL standard, those MRLs, in line with those trade consultations, ensuring they meet the trade criteria, and then appropriate consultation with the food standards organisation.

**Ms Croft:** As you noted, though, Senator, there is an international process as well, which our team participates in, in terms of establishing MRLs globally. For those who aren't familiar with them, MRLs are maximum residue limits.

**Senator STERLE:** Ms Croft, it's good to see you and the doctors again. Is everyone in Tamworth?

**Ms Croft:** Armidale.

**Senator STERLE:** I had a fifty-fifty chance of getting that one right!

**Ms Croft:** Dr Lutze is Canberra based. Doctors Trainer and Logan and I are in Armidale.

**Senator STERLE:** That's great. If there were a mass incursion, over thousands of sites, would you have enough staff to cope with that?

**Ms Croft:** Our role is to approve the registered product or to approve the permits. How the product is used in the marketplace then is not the responsibility of the APVMA. We certainly would have sufficient staff within the APVMA to do assessments of emergency permits, and we do turn those around very quickly. We can draw on our resources from across the whole agency where there are, particularly, emergency needs, and we have done that where we've needed to. We've had some examples in recent years—fall armyworm, Japanese encephalitis. We've



had a range of things where we've had an increase in the emergency permit application, and we've always been able to still process those within a few weeks generally, on average.

**Senator STERLE:** Wait till Bing Lee gets you! What was the name of that bug?

**Ms Croft:** Are you talking about—

**Senator STERLE:** That bug that gets in. The varroa does the damage, and then the other one smashes it up.

**Ms Croft:** I'm not sure.

**Unidentified speaker:** Huanglongbing.

**Senator STERLE:** Hong bing? What was it?

**Unidentified speaker:** That was for citrus.

**Senator STERLE:** Gee whiz. Crikey. Why don't they just call them things like Jack or Fred or something? Have you had to put in any extra resources from APVMA since the outbreak here in Newcastle and surrounding areas?

**Ms Croft:** No. We have a team that specialises just in doing permits—minor use or emergency permits—and they have been able to cope with the volume of work.

**Senator STERLE:** Good. What do you see as the differences in roles or responsibilities between your agency, New South Wales biosecurity, Plant Health Australia and the Department of Agriculture, Fisheries and Forestry in preparedness and response activities?

**Ms Croft:** Are you talking specifically in terms of our role?

**Senator STERLE:** Yes, I am.

**Ms Croft:** We are responsible for the registration of products or the use of products under permit, up to and including the point of sale. We also have some post-market functions in terms of once chemicals are in the marketplace. We have responsibility for if there are concerns raised about those products. We have an opportunity to review them under what we call a chemical reconsideration. That is our role. Once a product is approved and once it's sold, the responsibility for how that product is used in the marketplace is the responsibility of the state and territory governments. The federal department of agriculture has policy responsibility for ag vet chemicals, but we have the regulatory responsibilities.

**Senator STERLE:** Has the APVMA been involved in any preparedness exercises for varroa or bee emergencies in the past, to the best of your knowledge or the knowledge of the doctors?

**Ms Croft:** We certainly do work very closely with, in this case, New South Wales DPI in terms of us being prepared for what they might need and providing advice for what we might require in terms of, for example, data requirements to support an application. We've certainly had those types of conversations, regularly, with DPI and also with the other states and territories where it's needed. In terms of what might result from the incursion on the ground, that's probably not our role. It wouldn't be something we would normally be involved in.

**Senator STERLE:** No, I understand that. Sorry, I'm going to go down memory lane again here, to when Senator Colbeck and myself were in New Zealand about 13 years ago, and we were the envy of the world for not having varroa here in our nation. We were quite proud of that, weren't we, Senator Colbeck? You and I—all that hard work we did!

Have the other agencies war-gamed that with you? The chemicals you've just ticked off took only a couple of weeks to get the approval; is that right?

**Ms Croft:** Our average permit time frame is about 28 days, or somewhere around that.

**Senator STERLE:** I was trying to establish if there was any war-gaming in case this hit our shores, or did it just come to you as soon as we found out we had an outbreak here?

**Dr Lutze:** To my knowledge, we haven't been involved in a scenario exercise in relation to varroa mite incursions.

**Senator COLBECK:** You did say at the outset that these were pre-approved anyway, so we were ready in that sense.

**Ms Croft:** There were two registered products for control, and then we've done a number of emergency permits—particularly around protection and surveillance, but also around control—since the incursion.

**Senator COLBECK:** And in the circumstance where we can't eradicate, there are some products that are already registered that beekeepers can use immediately for control of varroa in their hives—if that's where we end up; is that right?

**Ms Croft:** Yes.

**Dr Lutze:** I might draw a distinction between not being involved in war-gaming scenarios and having been involved in planning for potential incursions of some of these pests and diseases, such as foot-and-mouth and varroa. We work, from time to time, quite closely with Animal Health Australia and Plant Health Australia in that preparedness planning, and that is the origin of some of these shelf permits. I can't speak explicitly for the two varroa insecticides that we have approved, but I suspect that they were probably part of those planning exercises with the greater biosecurity framework.

**Senator COLBECK:** Acknowledging that you are the approval agency for use, and that states have responsibility for monitoring and oversight at a jurisdictional level, are there any state differences in relation to these products, and are there any regional application differences? Certain actives do manifest in different ways or react and act in different ways in different climatic and locational conditions, so are there any particular differences in relation to these products that you're aware of?

**Ms Croft:** I can answer in a general sense, and Dr Trainer might be better placed to answer the specifics. Each state and territory has its own legislation in relation to control of use, and there are differences across those. One of the things that the recent review of Agvet chemicals considered was better harmonisation across the states and territories in terms of control of use. We do get applications, particularly where things might be related to climatic conditions, to have conditions of use that are regional in nature. We can do that now. Dr Trainer, is there anything you wanted to add to that answer?

**Dr Trainer:** Yes, briefly. We sometimes get requests for registration or approval on the permit within a specific jurisdiction, and there may be specific reasons for that—the data that supports the application might be specific only to that climatic zone or seasonal conditions, for example. But often for physical registrations we try, wherever possible, to achieve a national registration with a single national label. For permits, it can really depend on what we're being asked for by the applicant, who will ultimately be the permit holder. I don't have all of the current permits for varroa mite open in front of me, but I'm looking at a number of them and New South Wales DPI is a holder of several, as you might imagine, and the one in front of me here is not restricted to use in NSW; it's issued to all states and territories. So, to an extent, when we're looking at these, it really depends on: 'Do we have sufficient data in front of us to be satisfied of the statutory criteria across all the states and territories?' and, 'What is the holder is asking for?' as well.

I will just go back to the previous question, if I may, very quickly. You can see that we included a list of permits for varroa mite in the submission. A number of those permits were issued long before this incursion occurred, as minor use permits for use in the national surveillance and monitoring program. As Dr Lutze said, while we might not have been involved in war-gaming exercises per se, we certainly were involved in making sure that there were products approved under minor use permits for use in the surveillance program itself.

**Senator COLBECK:** It doesn't sound as though there are any regional variations in the permits. It's across the jurisdictions, effectively. But, given the incursions in New South Wales at the moment, that's where it's being applied.

I have a question regarding FMD vaccines and the holding of those. I have read through the data provided through the submission. There have been some questions about holding the vaccines here, in Australia. But, looking at the information in front of me, it's actually the antigen bank that's held in the UK for the manufacture of vaccines, not necessarily the vaccine. That has been an issue that's cropped up over the course of this inquiry. How do we look at that in the context of the difference in those two things? So the antigen is effectively the live virus that's being held to produce the vaccines?

**Ms Croft:** Perhaps the department of agriculture might be better placed to talk about the antigen debate, but—

**Senator COLBECK:** I'm not going to go down some of the paths—

**Ms Croft:** Dr Logan, did you have something you wanted to add?

**Dr Logan:** I was simply going to add that, as to how we've looked at approving the permit, it is that the vaccine is manufactured out of Australia. Then, should it be needed, it would be the vaccine that would be imported into Australia at that point in time.

**Senator COLBECK:** So there would be two elements, in the context, if—and I suppose we're getting into hypotheticals here, which is dangerous. The capacity for us to manufacture here would then rely on us being able to hold antigens here. Would there be a permit process for you, as a part of that?

**Ms Croft:** There are a couple of issues here that I might just work through. In order to manufacture a vaccine here, any veterinary product requires a Good Manufacturing Practice certificate, so we do an assurance process.

That is essentially us assessing the manufacturing facility to make sure it can appropriately manage the manufacture, in terms of both safety and quality, of any veterinary medicine. That's the first step. In terms of bringing vaccine in, we require an import consent, and the department also has a biosecurity import certificate or consent. So there are two parts to that process.

**Dr Logan:** I can update that earlier this year, as the threat of foot and mouth disease became closer, we had approved for import the vaccine produced under permit. At this point in time, they would need to work with the department on the biosecurity aspect, but from an APVMA perspective we've already looked at an import permit at this point.

**Ms Croft:** That is the vaccine as it's been approved by us—not a new vaccine.

**Senator COLBECK:** I understand that. So that's in the same way that we had pre-approvals for treatments for the euthanasing of hives—you're in the same situation, which is that approval isn't a time hurdle, if you like, in the circumstance where we might make the decision that we want to bring vaccines into the country.

**Ms Croft:** That's correct. The FMD vaccine that's approved, the Aftopor vaccine, is approved but can only be used for individuals authorised by the Chief Veterinary Officer.

**Senator COLBECK:** Okay, so there are a number of steps to approve the use, but the vaccine itself is approved for use.

**Ms Croft:** Yes.

**Senator COLBECK:** You talk about approved premises for the manufacture of vaccines, and there's been some discussion about new vaccine types, mRNA, for example, for delivery. Have you had any discussions with any organisations in relation to that in Australia? Could you give us a rough guess, perhaps even on notice: how many approved facilities would there be in Australia that would hold approval for the manufacture of vaccines?

**Ms Croft:** I'll be a little bit cautious here. What we have is about 19 manufacturing sites that can produce at least one element of the vaccine. There are probably only six that then would have the right set of facilities in order to do immuno-biologicals, and I think only probably four of those could. Having said that, none of them are currently approved to manufacture an FMD vaccine or an mRNA vaccine. So there would still be a process, if there was a need or an appetite to have a domestic manufacturing capacity.

**Senator COLBECK:** Okay, so there's still work to do there. With mRNA being a very new technology anyway, capacity more broadly is still going through its own processes.

**CHAIR:** In terms of the live antigen, so to speak, and having it here, have you ever been involved in discussions about the potential for Australia to host that manufacturing here in Australia, to facilitate the rollout of a vaccine for FMD?

**Ms Croft:** Dr Lutze, I might refer to you.

**Dr Lutze:** If I understand the question rightly, Chair, is it have we ever been involved in discussions about actually holding the vaccine components in Australia, or the antigens et cetera, for making vaccine?

**CHAIR:** Yes.

**Dr Lutze:** If that is the question, to my knowledge the answer is no. I think that sort of question is best directed towards our colleagues in the federal department responsible for quarantine.

**CHAIR:** Okay, thanks. I suppose another way to put this is that there's no legal bar against us doing that, from a chemical regulation viewpoint. Is that right?

**Dr Lutze:** From an APVMA viewpoint, no. It's obviously biosecurity regulation that needs to be addressed to determine whether it's actually safe to do so, noting the extreme hazard with this virus.

**Senator COLBECK:** The advice has been that there are potential issues for trade, with our current status as an FMD-free country, but those are issues that go beyond your remit. I just wanted to clarify that there's not a barrier here in that regard. More broadly on vaccines for foot-and-mouth disease, there's been some discussion that there may be a possibility of some research being conducted into mRNA vaccines that would not post—if that's the right word—the live virus. Are you aware of such developments? And are APVMA at all involved in at least keeping an eye on this research? Or are you involved more directly at all?

**Dr Lutze:** We've had some discussions with New South Wales Agriculture about their project and we are assisting them. From a regulatory standpoint, we are assisting them as they require assistance on their development pathway.

**Ms Croft:** In addition, regardless of who the applicant is, we do have a pre-application assistance program. So people can come and say: 'I'm looking at doing this thing. What might be the data requirements? What sort of

trials might I need to have done?' They can work through the various elements of what we would require in a submission ahead of time, so that they can appropriately prepare and plan for those, rather than putting in a submission and then finding out 12 months down the track that they didn't have the right information we needed to assess. That is open to any applicant.

**Dr Lutze:** And we would absolutely encourage any other party that is thinking about—and I mentioned New South Wales Agriculture, because that's public—

**CHAIR:** Yes.

**Dr Lutze:** We'd welcome any other party that's interested in developing such a vaccine to engage with us as early as possible.

**CHAIR:** So the New South Wales government have started that pre-application process, so to speak?

**Ms Croft:** I don't believe they have started the pre-application assistance process, but they certainly have talked to us, because, as I'm sure you've seen from their press release, they have things already in train in terms of the work they're doing in this space. So we've provided general advice, as we would. But I am not aware that they have started a formal pre-application assistance process—and not all applicants require it, either, depending on the circumstances.

**CHAIR:** Have you ever evaluated or approved an mRNA vaccine for animals?

**Ms Croft:** I believe the answer is no.

**CHAIR:** Do you have to bring in extra expertise to evaluate such a vaccine, do you think, or are you able to do that with your current resources?

**Ms Croft:** It is difficult to say, because we are talking about a hypothetical, so it's very difficult to know. But we do have very well credentialled experts at hand in the APVMA. Dr Logan, do you have something else you'd like to add?

**Dr Logan:** I think Dr Trainer might be able to add something on this one.

**Dr Trainer:** Yes, I can confirm that we have been actively reaching out to experts in the area of emerging vaccine technologies, including messenger RNA vaccines, to bring in experts to talk about the vaccines and just to ensure that all of our evaluators have been trained and are fully familiar with the technologies, and we will continue to do that with all emerging technologies, not just messenger RNA vaccines. But I can confirm that we have been doing that specifically with respect to messenger RNA vaccines.

**CHAIR:** Are any of your international counterparts more advanced in assessing such vaccines? I ask especially as to foot-and-mouth disease, but also as to mRNA more generally.

**Dr Trainer:** I think that, for the messenger RNA more generally, we have probably got more expertise on the human health side of things at this point in time than on—

**CHAIR:** Yes—

**Dr Trainer:** the veterinary vaccines. But we would have to take it on notice.

**CHAIR:** I should've earmarked that I am asking about animal health. So have any of your veterinary colleagues or counterparts overseas started this process at all, or are some more advanced than others?

**Dr Trainer:** We'd have to take that on notice.

**CHAIR:** If you could, that would be great. Thank you very much for your evidence this afternoon. I especially thank those who have travelled here to be with us. I think you have taken at least one question on notice, there at the end. We are asking for answers to those to be returned by Friday, 28 October, if that is possible. Thank you very much. That concludes today's hearing of the biosecurity inquiry. Thank you to all the witnesses who appeared, especially those who have stayed around for the day. Thank you to Hansard, broadcasting, the secretariat and our hosts here in Newcastle. The committee stands adjourned.

**Committee adjourned at 14:13**