



COMMONWEALTH OF AUSTRALIA

# Official Committee Hansard

## SENATE

RURAL AND REGIONAL AFFAIRS AND TRANSPORT  
LEGISLATION COMMITTEE

**Reference: Import risk analysis for pig meat**

MONDAY, 9 FEBRUARY 2004

CANBERRA

BY AUTHORITY OF THE SENATE



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**SENATE**  
**RURAL AND REGIONAL AFFAIRS AND TRANSPORT LEGISLATION COMMITTEE**  
**Monday, 9 February 2004**

**Members:** Senator Heffernan (*Chair*), Senator Buckland (*Deputy Chair*), Senators Cherry, Colbeck, Ferris and O'Brien

**Participating members:** Senators Abetz, Bishop, Boswell, Brown, Carr, Chapman, Coonan, Eggleston, Chris Evans, Faulkner, Ferguson, Harradine, Harris, Hutchins, Knowles, Lightfoot, Mackay, Mason, Sandy Macdonald, McGauran, McLucas, Murphy, Payne, Ray, Santoro, Stephens, Tchen, Tierney and Watson

**Senators in attendance:** Senators Buckland, Cherry, Colbeck, Ferris, Heffernan, O'Brien and Stephens

**Terms of reference for the inquiry:**

To inquire into and report on:

The administration of Biosecurity Australia with particular reference to the assessment, methodology, conclusions and recommendations contained in the draft import risk assessment analysis report on the generic Import Risk Analysis for pig meat dated August 2003 and related matters.

## **WITNESSES**

<b>BANKS, Dr David John Douglas, General Manager, Animal Biosecurity, Biosecurity Australia, Department of Agriculture, Fisheries and Forestry.....</b>	<b>1, 29</b>
<b>BARNES, Mrs Mary Bridget, Consultant Statistician, Maths and Information Sciences, Commonwealth Scientific and Industrial Research Organisation.....</b>	<b>19</b>
<b>HALL, Dr William, Research Manager, Research and Innovation Division, Australian Pork Ltd.....</b>	<b>19</b>
<b>HARWOOD, Ms Mary, Executive Manager, Biosecurity Australia, Department of Agriculture, Fisheries and Forestry .....</b>	<b>1, 29</b>
<b>HIGGINS, Dr Paul Anthony, Chairman, Member and Delegate, Australian Pork Ltd .....</b>	<b>19</b>
<b>MARTIN, Dr Robyn Gail, Manager, Non-Ruminants, Animal Biosecurity, Biosecurity Australia, Department of Agriculture, Fisheries and Forestry.....</b>	<b>1, 29</b>
<b>MORRIS, Mr Paul Charles, Executive Manager, Market Access and Biosecurity, Department of Agriculture, Fisheries and Forestry .....</b>	<b>1, 29</b>
<b>PLOWMAN, Ms Kathleen Ann, General Manager Policy, Australian Pork Ltd.....</b>	<b>19</b>
<b>PULLAR, Mr David Murray, Consultant on Risk Analysis and Import Risk, Commonwealth Scientific and Industrial Research Organisation .....</b>	<b>19</b>
<b>THORNTON, Dr Eric John, Veterinary Consultant, Australian Pork Ltd .....</b>	<b>19</b>



**Committee met at 4.05 p.m.**

**BANKS, Dr David John Douglas, General Manager, Animal Biosecurity, Biosecurity Australia, Department of Agriculture, Fisheries and Forestry**

**HARWOOD, Ms Mary, Executive Manager, Biosecurity Australia, Department of Agriculture, Fisheries and Forestry**

**MARTIN, Dr Robyn Gail, Manager, Non Ruminants, Animal Biosecurity, Biosecurity Australia, Department of Agriculture, Fisheries and Forestry**

**MORRIS, Mr Paul Charles, Executive Manager, Market Access and Biosecurity, Department of Agriculture, Fisheries and Forestry**

**CHAIR**—I declare open this public hearing of the Senate Rural and Regional Affairs and Transport Legislation Committee. The committee is inquiring into the import risk analysis for pig meat. I welcome you all here today. The committee has authorised the recording, broadcasting and rebroadcasting of these proceedings in accordance with the rules of the order of the Senate of 23 August 1990 concerning the broadcasting of Senate proceedings. The committee has authorised for publication all public submissions received to date. I place on record that all committee witnesses are protected by parliamentary privilege with respect to their submissions and evidence. Any act by any person which may disadvantage a witness on account of their evidence is a breach of privilege. While the committee prefers to hear evidence in public, the committee may agree to take evidence confidentially. However, the committee may still publish or present confidential evidence to the Senate at a later date. The committee would consult the witnesses concerned before doing this. The Senate can also order the publication of confidential evidence. I welcome the witnesses from Biosecurity Australia. I invite you to make a short opening statement if you so choose, and then we will tear you apart with questions!

**Ms Harwood**—I have a couple of brief comments about the import risk analysis on pig meat. The analysis commenced in 1998. It was in response to market access requests from a number of countries, so it is what we call a generic import risk analysis. In 2001 an issues paper was released. In October 2002 we released a methods paper describing the methodology to be used in the IRA. Then in August 2003 we issued the draft import risk analysis report for a 60-day stakeholder comment period. We received a number of submissions, and the risk analysis panel has been working through those submissions and is finalising its recommendations and preparing the final report.

**CHAIR**—Before we go to questions, I would like to make sure that it is well and truly on the record that the hearing today is something that has been in place for a long time and it certainly is not associated with any of the events or announcements of recent days. I think it is fair to say that Australia has a proud record of being clean and free, as it were, and there is a strong commitment by all to make sure that we maintain our quarantine barriers to maintain that reputation.

**Senator O'BRIEN**—I want to go to our obligations under the WTO and how the government interprets these obligations and how we act on them. Would it be reasonable to say that Biosecurity Australia approach these import risk assessments with the same interpretation of the rules—that is, there has been a consistent interpretation of those rules or obligations across all import risk assessment processes?

**Ms Harwood**—We certainly seek to do that.

**Senator O'BRIEN**—I assume Biosecurity's view of the appropriate level of protection—the ALOP—has remained the same; that is, we take a very conservative approach. Is that correct?

**Ms Harwood**—Yes. Australia has a conservative approach to quarantine, seeking to manage quarantine risks to a very low level.

**Senator O'BRIEN**—Is there any formal interpretation of how you approach these obligations? Is there a document that spells out this interpretation?

**Ms Harwood**—The main document guiding our working import risk analysis is the handbook that is published by Biosecurity Australia. We can provide copies of that to the committee if you do not already have them. The handbook sets out the administrative process that we follow—the sequence of steps for the import risk analysis. As well as that, we have a published methodology—a draft guidelines on the technical methodology for conducting the analysis, the science process that we follow.

**Senator O'BRIEN**—I am interested in how Biosecurity Australia ensures a consistency of interpretation so that the same test is applied to the pig import risk assessment as was applied to the salmon IRA, the cooked

chicken IRA or the citrus fruit IRA. In relation to the action by the EU against Australia in the WTO that goes to the issue of our quarantine regime for imports, I assume that we have put, or are putting, a very clear and comprehensive explanation of how we interpret our obligations.

**Ms Harwood**—At the moment, that dispute is not at the stage where parties are preparing submissions. The panel has been established by the dispute settlement board but has not been populated—that is, the members of the panel have not been selected. At this stage we are not in the situation of preparing submissions.

**Senator O'BRIEN**—Is there an objective test to be applied to each of these interpretations? In the handbook, will I find an objective test to be applied?

**Ms Harwood**—There is a disciplined structure to how the risk assessment test is done, and we seek to apply that consistently across different commodities. So, yes, there is a transparent method and process for doing the import risk analysis, and we are aware of the need for consistency in how we approach quarantine risks between different analyses.

**Senator O'BRIEN**—I am just concerned that, theoretically at least, you could have a tougher test for one import risk assessment than another. That is a problem with quantitative risk assessments, is it not?

**Ms Harwood**—I do not know that it is particularly peculiar to the quantitative methodology but, in terms of treating quarantine risk consistently—managing to a consistent appropriate level of protection—we seek to do that, as that is an obligation under the SPS agreement.

**Senator O'BRIEN**—To expand further: I would have thought that, under the qualitative approach, one panel's interpretation of a matter as low risk might be another panel's moderate risk. In other words, a qualitative approach is more subjective than a quantitative approach.

**Ms Harwood**—We seek to use quantitative methods where that is feasible—that is, where the scientific evidence permits—and we use qualitative methods where the information is not available to use a quantitative approach. So I do not think that need affect the consistency or the approach to quarantine risk that we take.

**Senator O'BRIEN**—I think you are aware that this committee has taken a strong view on the issue of quantitative risk assessments, which is at variance with that. I want to come back to that point but, firstly, can you tell me what role Biosecurity Australia has had in the negotiation of the free trade agreement with Thailand?

**Ms Harwood**—We have been involved and informed as the negotiation of that agreement has proceeded. The actual negotiation has largely been conducted by people from outside Biosecurity Australia, but we certainly have been consulted on the wording in that agreement and the nature of the provisions on SPS matters.

**Senator O'BRIEN**—In the latest draft of that agreement there is a section headed 'Sanitary and phytosanitary measures and food standards'. That is, the agreement contains a section negotiated with the Thai government on how both countries will apply disciplines to measures taken for the purpose of protecting animal and plant life. Can I assume that Biosecurity Australia have been closely involved in the drafting of that chapter 6?

**Ms Harwood**—Yes.

**Senator O'BRIEN**—For the sake of consistency, would the contents of that chapter reflect the detail of our defence case in the EU action in the WTO as to how we approach that issue?

**Ms Harwood**—In free trade agreements generally the SPS provisions are of a general nature. They would normally commit both parties to respecting the disciplines of the SPS agreement, with each party essentially recommitting to science based decision making in quarantine. I do not know that they would go much further than that in the way they are constructed.

**Senator O'BRIEN**—Would it reflect a different approach to other import risk assessments?

**Mr Morris**—Perhaps I could just add to that last comment. The government takes a very clear position that when it goes into FTA negotiations it is not about negotiating SPS conditions. We have a clear obligation under the WTO to take—and we do—a science based approach to our decisions on quarantine matters. So when we go into those negotiations we cannot actually negotiate on those matters; they are based on the science. That is the case with Thailand and also with other FTAs we have entered into.



**Senator O'BRIEN**—If that text in the Thai free trade agreement goes to sanitary and phytosanitary measures, do I understand you to say that it would not differ from the regime against which we are assessing this draft import risk assessment?

**Ms Harwood**—It respects and reflects our import risk analysis approach to quarantine—that is, the free trade agreement texts are of a general cooperative nature. They do not prescribe the way in which we will carry out our import risk analysis work; that is unaffected by the text.

**Senator O'BRIEN**—Does Biosecurity Australia have the latest draft of chapter 6?

**Ms Harwood**—I would presume so, yes.

**Senator O'BRIEN**—Could you supply that to the committee, please?

**Ms Harwood**—I do not know whether it is a public document. I would have to consult on that with the Department of Foreign Affairs and Trade.

**Senator O'BRIEN**—This is the latest draft. How many drafts have there been?

**Ms Harwood**—Again I would have to take that on notice.

**Senator O'BRIEN**—Because it is a draft, I take it that the issue being negotiated has not been concluded; or is this a draft for mode of expression rather than substance?

**Ms Harwood**—My understanding is that the essential content is settled. But again I think that is more appropriately a matter for the Department of Foreign Affairs and Trade, which is responsible for the text of FTAs.

**Senator O'BRIEN**—Can I assume that Biosecurity Australia has been involved in the free trade agreement negotiations with the US?

**Ms Harwood**—Yes.

**Senator O'BRIEN**—Material released by the US administration this morning refers to the establishment of a standard technical working group involving Biosecurity Australia and the US Animal and Plant Health Inspection Service to look at what are described as 'sanitary and phytosanitary barriers to agricultural trade'. I assume that Biosecurity Australia is across the detail of that?

**Ms Harwood**—Yes.

**Senator O'BRIEN**—This working group is to include trade agency representation. Do you know why that is to be the case?

**Ms Harwood**—There is essentially a program of work in both directions that each is undertaking—that is, the US has a series of market access requests which require quarantine risk assessment. Likewise, Australia has market access requests of the US where we are seeking for Australian produce to go to the US. That technical working group provides a forum for following progress and discussing issues as they arise in those assessments. Trade agencies on both sides, including DFAT and USTR, have an interest in the progress of those, but the scientific matters are the province of Biosecurity Australia and APHIS.

**Senator O'BRIEN**—But I thought quarantine was about science not trade.

**Ms Harwood**—That is right, and the discussion is of a technical nature.

**Senator O'BRIEN**—The document I have just been referring to makes specific reference to this working group looking at the issue of pork, as are we. Do you know how this working group will operate?

**Ms Harwood**—Yes. The working group is chaired by me and my counterpart from the US agency APHIS, Mr Bobby Accord. It will have a work program of matters that it looks at, including essentially the matters of most interest in both directions on the quarantine risk assessment front. For the US those commodities of interest include pork. That is a major market access request of them to us.

**Senator O'BRIEN**—Does that mean we could have the current process—the generic investigation of pork—a Thai investigation of pork and a US investigation of pork?

**Ms Harwood**—No, it does not. In fact, the technical working group's consideration of matters pays full respect to the IRA process and does not seek to intervene in it or change it. The forum of the technical working group is merely a place where technical issues that can benefit from dialogue and exchange can be discussed. It does not supplant, replace or divert the import risk analysis process as it stands.

**Senator FERRIS**—Or, importantly, compromise it.

**Ms Harwood**—Or compromise the approach we take to quarantine.

**Senator O'BRIEN**—But both the US and Thailand can now have input into the generic risk assessment, can they not?

**Ms Harwood**—That is correct. But we have this type of dialogue with many of our trading partners. We have exchanges of this sort with trading partners where we focus on technical interests of bilateral interest in terms of market access issues that we have with them and that they have with us. This is a more formal mechanism in terms of the technical working group established by the FTA, but it is the same process. It does not change the IRA.

**Senator O'BRIEN**—So these separate country-specific working groups are to address issues that those countries have with our quarantine?

**Ms Harwood**—And the reverse—issues that we have with theirs.

**Senator O'BRIEN**—With regard to pork?

**Ms Harwood**—With regard to whatever commodities each country wishes to put onto the agenda.

**Senator O'BRIEN**—But in this case, because this is an inquiry about pork, I am trying to be specific.

**Ms Harwood**—I am not aware if pork is an issue at the moment on the agenda with Thailand, but with the US it is.

**CHAIR**—Are there pork diseases in the world that Australia does not have?

**Ms Harwood**—The risk assessment looks at the disease status for each of the diseases of quarantine risk. Yes, there are diseases that other countries of the world have that Australia does not. The proposed quarantine measures in the draft IRA are designed such that conditions would be determined according to the disease profile of the country seeking access. So, depending on what diseases they have, the quarantine conditions would be developed to deal with those diseases. Does that make sense? Even though it is a generic IRA, when you come to the point of determining an import policy it will reflect the actual disease status of the exporting country.

**Senator FERRIS**—That is why chicken meat is cooked in Thailand and not brought to Australia raw.

**Ms Harwood**—The chicken meat analysis has a policy that applies to chicken meat from Thailand, specific to Thai conditions.

**CHAIR**—So, if the CSIRO, for instance, says that under a certain protocol there is a 99 per cent chance of a disease entering Australia in the next 10 or 15 years, who do we believe—you or the CSIRO?

**Ms Harwood**—I am sorry; I would have to have some specific thing to respond to on that.

**CHAIR**—We will come to the specific.

**Ms Harwood**—Thank you.

**Senator O'BRIEN**—So I can understand this, how does the proposed agreement with the US on quarantine matters, protocols or whatever it is compare with the agreement with Thailand and with our general standard that we are trying to defend at the WTO?

**Ms Harwood**—All of these mechanisms are compatible with and respect Australia's right to determine the level of quarantine protection that will apply. They in no way compromise our approach to quarantine and the standard of quarantine that we apply.

**Senator O'BRIEN**—We are discussing the general issue with the EU at WTO level, we have some position in draft form with the Thai government, we are proposing something else perhaps with the US government, and this import risk assessment is being processed. It sounds fairly confused to me. How does that all tie together?

**Ms Harwood**—The import risk analysis process is central to our work. Those IRAs continue according to a declared and transparent process and methodology, as I have said. In discussing progress in market access requests with trading partners such as the US and Thailand, there would be technical issues we may seek to resolve with them, but that just informs the IRA process. It can be a means of gaining technical information that we need, or having that will enable us to do a better analysis. It does not compromise the import risk analysis process. They are quite compatible.

**Senator O'BRIEN**—I think we have established that anyone who has an interest in importing a product into Australia has a right to have an input into the generic import risk assessment. I am trying to understand the difference between that and the special working group being established in—

**Ms Harwood**—Essentially they are just putting a framework around that dialogue. They are just putting up a framework for regular dialogue on SPS matters of mutual interest between two countries.

**Senator O'BRIEN**—So they are just window-dressing?

**Ms Harwood**—I would not say that. They provide a structure for discussing those issues of mutual interest.

**Senator O'BRIEN**—Are they of substantial advantage for those countries?

**Ms Harwood**—They are of advantage to both countries if they help to resolve scientific issues through technical exchange, and that is the objective.

**Senator O'BRIEN**—But scientific issues can be, and are, discussed through the generic import risk assessment process now.

**Ms Harwood**—With any of the countries that are seeking access for pig meat, for example, we can and do have technical discussions with them.

**Senator O'BRIEN**—We can and do have technical discussions with the countries now, but we are establishing a protocol to have technical discussions with these countries about this product. Is that essentially what you are telling me?

**Ms Harwood**—The process for the US is not specific to pig meat. It is a general technical working group.

**Senator O'BRIEN**—But it specifically mentions pig meat.

**Ms Harwood**—The USTR web site mentions pig meat because that is a commodity of interest to the US in terms of their exports to Australia.

**Senator O'BRIEN**—So it goes beyond the commodities that they list?

**Ms Harwood**—There is no reference to any specific commodities in the text of the FTA.

**Senator O'BRIEN**—So they can discuss anything they like?

**Ms Harwood**—The agenda is set by mutual consent between me and the director of APHIS.

**Senator O'BRIEN**—Is anything agreed?

**Ms Harwood**—The group would not be established until the—

**Senator O'BRIEN**—Then why would the US put certain products on their web site?

**Ms Harwood**—I presume it is because they wish to say that the matters of current SPS interest to the US in terms of market access in this direction are ones that can be handled by that working group.

**Senator O'BRIEN**—Are we likely to knock back any request to discuss an issue?

**Ms Harwood**—In terms of the four commodities listed on—

**Senator O'BRIEN**—Or any commodity.

**Ms Harwood**—I would assume that we would be willing to discuss the market access issues that the US has an interest in, just as I would expect them to be willing to discuss market access issues of quarantine of interest to us.

**Senator O'BRIEN**—What you are telling me is that we would be prepared to discuss any issue they want to raise in that context. I am basically asking you: if the matters that are specified on the US web site have not specifically been agreed, either they are presuming that we are going to discuss it or it is unlikely that we will knock back any request to discuss any particular item.

**Mr Morris**—Basically, as Ms Harwood has laid out, there are no specific items in the agreement as it stands at the moment. There is a general mechanism being established under that agreement, which is not all that unusual. Under the WTO there is an SPS chapter, and quite often countries in free trade agreements replicate or have similar chapters as you would find in the WTO. As we found in the Thai agreement and in the US agreement, there are SPS chapters, but those SPS chapters go only as far as establishing that basically we both support the obligations under the SPS agreement, and establishing a consultative mechanism so that we can make sure that we are talking about all those issues that are of common interest to us—and that includes the ones that Ms Harwood has said in terms of those bilateral issues, but it also includes the opportunity to

consult on issues of interest to us in a multilateral forum, for example. So if, for example, we wanted to work with the US in terms of the OIE on particular standards being developed there, or in terms of Codex or other relevant fora, this mechanism actually provides a useful arrangement whereby we can consult with them and work out appropriate approaches to those fora. So it is just formalising an approach we have taken in the past to work collectively and commonly on issues.

**Senator FERRIS**—But there is no agreement to include pork on the agenda for the meeting at this point.

**Ms Harwood**—The technical group has yet to be established and to establish an agenda—

**Senator FERRIS**—So there is no agreement.

**Ms Harwood**—No.

**Senator O'BRIEN**—So the US web site is wrong.

**Ms Harwood**—I would assume that the US will want to put it on.

**Senator FERRIS**—But there is no agreement.

**Senator O'BRIEN**—Does that mean that they have raised it and we have not agreed or that is their assumption?

**Ms Harwood**—The group does not exist yet, and it will not exist until the free trade agreement comes into force.

**Senator O'BRIEN**—Could we go back to quantitative and qualitative assessments. Recommendation 6 in this committee's report on apple imports, tabled in March last year, called for both quantitative and qualitative assessments to be included in the import risk assessments. In the response, the minister stated that the use of a quantitative analysis requires more resources and is problematic when the data is of poor quality. Is that still the government's view?

**Ms Harwood**—We seek to use quantitative analysis where the data permits, but there are circumstances where there is not sufficient data to use a quantitative approach and so we use a qualitative approach.

**Senator O'BRIEN**—So it is still the government's view.

**Ms Harwood**—Yes, essentially.

**Senator O'BRIEN**—So essentially Mr Truss is saying that he is not prepared to put in the resources necessary to undertake comprehensive risk assessments, and where the data is poor he accepts a lesser standard.

**Ms Harwood**—It is not possible to do a quantitative assessment in some circumstances if the data is not present.

**Senator O'BRIEN**—And you would therefore end up with a less accurate standard.

**Ms Harwood**—Not necessarily, but you are not in a position to use a quantitative approach in the assessment.

**Senator O'BRIEN**—In a document entitled *The importation of uncooked pig meat: draft methods for import risk assessment*, it is stated:

Quantitative data will not be available to support many of the probabilities to be assigned to the pathway steps considered in this analysis. Likelihoods assigned to these steps will be subsequently based on expert judgements ...

So it is fair to say, isn't it, that a number of aspects of the analysis in this import risk assessment are limited by poor data?

**Ms Harwood**—I do not think that is the case. The fact is that in any biological risk assessment expert judgment must play a large part in terms of how you bring the evidence to bear in estimating likelihoods.

**Senator O'BRIEN**—But it is just a fact that different panels will potentially assess risk differently under the qualitative approach.

**Ms Harwood**—Biosecurity Australia is obviously involved in all of the risk assessments so we are in a position to assist panels in that process. The document is a public one and open for comment. If there were inconsistencies in the approach to risk I am sure they would be brought to our attention. But we certainly do our best to take a consistent approach to the way we estimate and manage risk.

**Senator O'BRIEN**—Is it fair to say that if resources were available, in contrast to the limits identified by the minister in his response to the Senate, more work could have been done on building stronger quantitative assessment of the risk?

**Ms Harwood**—If your question relates to pig meat, I think we have done an extremely thorough and comprehensive assessment. It is one of the largest biological risk assessments in this import risk assessment context. It is a very extensive document and has been acknowledged as that.

**Senator O'BRIEN**—Okay. Let us go to the draft import risk assessment document, volume 2, page 383. The section relates to post-weaning multisystemic wasting syndrome virus, which the chairman would be well aware of. You advise that the disease has been described in most countries but not in Australia, and you say that one necessary factor in PMWS is porcine circovirus, or PCV-2, and that PCV is present in Australian herds. But clearly other factors must come together with PCV-2 to trigger PMWS. Is that correct?

**Dr Banks**—That is correct.

**Senator O'BRIEN**—What are the other factors that must be present with PCV-2?

**Dr Banks**—There are currently five hypotheses as to what the other cofactors may be.

**CHAIR**—Is that code for 'we really don't know'?

**Dr Banks**—There are uncertainties about the cause of PMWS. We do know, as the senator has said, that porcine circovirus type 2 is believed to be a necessary factor in producing the syndrome. However, in regard to what additional factors that are required in most outbreaks—certainly in the field—there is definitely some uncertainty as to what they are.

As I said, there are five hypotheses. One is that these are management factors, and in fact PMWS was at one stage called 'poor management with stress'. There is possibly a genetic factor. Some strains of pig may be more susceptible than others. There is a possibility that some immunology stimulation by vaccines or other means could be involved. There is a hypothesis that possibly another agent—'agent X' as it is often referred to—is involved. The final possibility is that there is a different strain of porcine circovirus type 2 that is present in countries with PMWS but is not present here in Australia. They are the five hypotheses that the risk analysis panel had to grapple with. We formed a technical working group of people with specialist knowledge who could look at those different hypotheses.

**Senator O'BRIEN**—It says in the draft:

There is limited information on the physico-chemical properties of PCV.

Can you expand on that point?

**Dr Banks**—There is not a wealth of research on what can kill the virus—various treatments, chemicals or whatever. That is essentially what that means.

**Senator O'BRIEN**—The draft also advises:

The mode of transmission of porcine circoviruses has not been properly investigated.

That is on page 384.

**Dr Banks**—Porcine circovirus is excreted in a number of excretions from a pig, and it is assumed that contact at least is one mechanism of transfer. What it says in the report, though, is that there is not a great deal of experimentation to prove that.

**Senator O'BRIEN**—Mode of transmission is a critical matter in terms of developing a protocol to manage the disease, is it not?

**Dr Banks**—Certainly it is a factor that the risk analysis panel had to take into account when assessing the risk of this particular syndrome entering Australia.

**Senator O'BRIEN**—What they are taking into account is that the mode of transmission of porcine circoviruses has not been properly investigated. That is what the draft says.

**Dr Banks**—I think you will find that the risk analysis at all points made the assumption that it could be transmitted through meat, and that is reflected in the IRA.

**Senator O'BRIEN**—So essentially, although it is a possibility, you have somehow decided that the risk is low—not you personally but the panel.

**Dr Banks**—As chairman of the panel—

**Senator O'BRIEN**—You may have decided personally; I did not want to ascribe that, because I did not know, but I am happy if you put it on the record.

**Dr Banks**—We the panel assessed the risk as such that we believed that it did need risk assessment. So in that regard we came to a conclusion that this disease did need risk management before pig meat could come into the country.

**Senator O'BRIEN**—Let us step through that a bit more. On page 387 of the draft IRA, under the heading 'Release assessment' and the subheading 'R1—the likelihood that a source herd is infected', it says:

There are few data on the between herd prevalence of PMWS in affected countries.

You then refer to the fact that the disease is 'significant and spreading' in England and Wales and that the prevalence of PMWS in large holdings in the USA is over 20 per cent. You state that, given the link between PCV2 and PMWS, the between-herd prevalence is in fact much higher than reported. Section R2 addresses the likelihood of a slaughter-age pig from the infected herd being infected. What is the basis of the panel's conclusion that the risk of infected slaughter-age pigs being selected from a herd is moderate?

**Dr Martin**—The panel, considering whether the source herd was infected—which is R1—looked at the figures for prevalence in those countries. As you said, figures of 20 per cent have been reported, and up to 50 per cent in one that we are aware of, so a moderate likelihood was assigned, which was in the range of 30 to 70 per cent.

**Senator O'BRIEN**—So 30 to 70 per cent probability is in the moderate range?

**Dr Martin**—It is higher than what has been reported in some countries but, taking into account that PCV2 would be more prevalent and that the disease may not have expressed, moderate prevalence was assigned.

**Senator O'BRIEN**—So seven chances in 10 is a moderate probability?

**Dr Martin**—Yes. As defined in the methods section of the draft IRA, a moderate likelihood is assigned between 0.3 and 0.7. These are terms that are used consistently. Whether they were termed 'moderate' or something else, it was really to give a consistent term.

**Senator O'BRIEN**—So wherever we see the word 'moderate' we can understand that that could mean seven chances in 10?

**Dr Martin**—Yes, between three and seven.

**Senator O'BRIEN**—I understand that, but what I am saying is that if you wanted to ask, 'At worst, what does moderate mean?' it means a probability of seven chances in 10—or 70 per cent.

**Dr Banks**—It means somewhere between 30 per cent and 70 per cent.

**Senator O'BRIEN**—I understand what you are saying, but what I am saying is that if you wanted to take a worst-case view of the assumption, it could be, say, 6.9 out of 10. It could be 3.1, but it could also be 6.9.

**Dr Banks**—Exactly.

**Senator O'BRIEN**—You have referred to one study that followed a batch of pigs from a PMWS infected herd through to slaughter, and it appears these pigs were clear of the virus. But, in a second study, over half the pigs monitored appeared to have been infected. So that would fall in the moderate risk category?

**Dr Banks**—Fifty per cent would be within the moderate category.

**Senator O'BRIEN**—Does over 70 per cent—70 to 100 per cent—mean 'high'?

**Dr Banks**—Yes. That is all described at the beginning of the import risk analysis.

**Senator O'BRIEN**—It is a long document.

**CHAIR**—Senator O'Brien, can I just give you a rest for a minute?

**Senator O'BRIEN**—If you have to.

**Senator FERRIS**—Ms Harwood, have you read the submission the committee has received from APL, Australian Pork?

**Ms Harwood**—Unfortunately we have not had access to any of the submissions to this inquiry.

**Senator FERRIS**—I understand that they have only just been released for publication. It would have saved the committee a little time if you had had an opportunity to have a look at the executive summary, in which a number of points are raised that indicate APL's concerns with the methodology and the resulting risk

management measures that are proposed in the draft IRA. However, if you have not had an opportunity to look at that, perhaps the secretariat can give you a copy so that you can have a look at it—and I have a couple of other questions that do not stem from that particularly—because there are a number of issues raised in the executive summary which I would like you to respond to, rather than me doing question and answer or putting those questions on notice. Do you agree that one possibility of a contributing cause of PMWS is the PCV2 virus that Senator O'Brien has been talking about and that the virus that is present in Australia is different from the PCV2 virus that may cause PMWS?

**Ms Harwood**—One theory relates to that. I will ask Dr Banks to explain it.

**Dr Banks**—Yes, that is one of the theories and it was certainly one of the main factors that the risk analysis panel took into account when assessing the risks of the entry of pig meat.

**Senator FERRIS**—Do you believe the evidence that has been submitted to this inquiry that the PCV2 virus is extremely heat resistant and that current cooking protocols will not inactivate or reduce levels of the virus? Is that a concern you have?

**Dr Banks**—The risk analysis states quite clearly that PCV2 is a very heat resistant virus and that the risk management measures are not based solely on cooking. That is clearly stated in the import risk analysis.

**Senator FERRIS**—I would like to clarify that. Are you saying that there is an overseas virus that might cause PMWS, that your protocols will not inactivate it—

**Dr Banks**—The cooking protocol will not—not necessarily.

**Senator FERRIS**—Yes, the cooking protocol. What other protocols are you suggesting would be appropriate to ensure the risk is significantly minimised?

**Dr Banks**—I will answer the question on cooking. Certainly, we think that cooking, according to the regime outlined in the IRA, may well reduce the amount of virus in meat, but we accept in the IRA that it will not eliminate it. Therefore, other measures were required to reduce the risk. This particular agent has an affinity for the lymphatic system. It is for that reason that the risk management measures required are not only cooking but removal of the head and neck, removal of the lymph nodes and removal of the bones, and then it has to be cooked or cured.

**Senator FERRIS**—You are satisfied that that significantly minimises the risk?

**Dr Banks**—The risk analysis panel believes that this reduces the risk down to the appropriate level of protection.

**Senator FERRIS**—So you did not consider invoking the precautionary principle while you did some further work on that?

**Ms Harwood**—I would say rather that they have taken a very conservative approach to managing risk. These are very tough measures and they are quite confident that they address the risk posed by PMWS.

**Senator FERRIS**—So this would involve removing the head, the lymph glands and the bones and then cooking the remaining meat at a particular temperature?

**Dr Banks**—Yes.

**Senator FERRIS**—And you are convinced that that would then be satisfactory?

**Dr Banks**—We believe that that risk management would meet Australia's appropriate level of protection, yes.

**CHAIR**—What temperature, just out of curiosity?

**Dr Banks**—The temperature that it would be cooked at for other reasons, such as porcine reproduction and respiratory syndrome—

**CHAIR**—If you were cooking the Christmas roast, would it be the same temperature?

**Dr Banks**—is 70 degrees Centigrade for 11 minutes, but that is the minimum amount. In fact, commercial production normally takes a lot longer than that.

**CHAIR**—So the juice would still be running out, but it would not be jumping off the plate.

**Dr Banks**—No. This is going to be cooked product.

**Senator O'BRIEN**—At 70 degrees for 11 minutes?

**Dr Banks**—Yes. You have warm-up times and cool-down times. We insist that that is the minimum.

**Senator O'BRIEN**—Seventy degrees for 11 minutes is not what you would consider cooked.

**Senator FERRIS**—I do not consider myself to be a gourmet cook, but could you please take me through how the meat would then be? Would it be suitable for eating as a cold sliced sandwich product? Would it be simply suitable for sausages? I think, Senator O'Brien, that we went through this discussion with the chicken meat issue about what the meat would then be suitable for.

**Dr Banks**—We decided that you could eat the hams okay but that the sausages would probably need normal cooking.

**CHAIR**—Surely, if you have a lump of meat this big and you cook it for 11 minute at 70 degrees—

**Dr Banks**—That is the core temperature, the middle. The middle has to get there. In fact, it would take a lot longer for the outside to get there. As I said, there is a long lead-up time at lower temperatures. Nonetheless, it takes time to get up to that heat. Once you have attained that heat, it has a long time to cool down again, so there is a wide safety margin.

**Senator FERRIS**—So it would be fair to say that by the time you get that temperature in the core the outside would be cooked to a greater extent than the core would be. So I ask you again: how edible would the product be and what would it be suitable for if it were pork and not ham? I remember this conversation from the Thai chicken meat inquiry, where we finished up with a product that was cooked to the extent that it could then only be made into processed food. I am trying to establish whether there is a similarity.

**Dr Banks**—It is not cooked to that level. This is the methodology that is currently being used and it is the current cooking regime for imported pig meat.

**Senator FERRIS**—And this would be cooked offshore?

**Dr Banks**—The draft IRA proposes that it could be cooked either offshore or onshore.

**CHAIR**—Going to the onshore cooking—and I do not know whether you have been to one of those establishments where they thaw it and cook—they often trim it. What do you do with the trimmings?

**Dr Banks**—In most cases at the moment the trimmings go straight back into the product, so any waste is treated the same as the product.

**CHAIR**—But if it is not? How would you identify that?

**Dr Banks**—The product comes at the moment in a form that has already been heavily trimmed and it is essentially ready to process without any significant wastage. The risk analysis panel took the view that if there was any wastage it would be incorporated into products which would then go—

**CHAIR**—And who would supervise that?

**Dr Banks**—through a cooking process, so any wastage from that is in fact taken into account in the rest of the IRA.

**Senator FERRIS**—Can I go back to the question I was going to ask when you said it could be cooked onshore or offshore. Given that you agreed with my earlier point about the possibility that PMWS could be caused by a PCV2 virus which is different from that in other countries, why would you allow that meat to come into Australia in an uncooked state?

**Dr Banks**—Because we have tightened up the transport arrangements for moving pig meat. The proposed requirements in the draft IRA are that the shipment should come to the nearest port of any processing facility and, if it is outside an urban area, it would have to take the most direct route. It would also have to be contained in much more robust containers than has happened in the past. Also the waste would have to be handled in the same way that we handle galley waste from overseas ships and overseas aircraft, which is essentially incineration or deep burial under tight security.

**Senator FERRIS**—Why wouldn't you just say that it has to be cooked offshore? Instead of having to go through all of those protocols involving a number of different interventions by human hand—handling and transport, storage and cooking—why wouldn't you just say that it needs to be cooked offshore so there is absolutely no chance that the virus which you have agreed is present in some pig meats overseas and which is different to that in some pig meats in Australia could have the opportunity to get here? You would surely be minimising it much more efficiently if you said that the pig meat must be cooked offshore so that there is no question of transport handling, direct routes, who cooks it, how it is cooked, who checks on it and then how it is packaged and what happens to the trimmings.



**CHAIR**—Or whether someone knocked off a pallet at the wharf and took it home.

**Senator FERRIS**—Leaving aside that question, there are a number of interventions in that chain that seem to me to be masking the potential for an intervention that could result in raw pig meat containing that virus, which is different to our virus, becoming uncontrolled in the market chain.

**Dr Banks**—The panel disagrees with your assessment.

**Senator FERRIS**—I know that, and I am asking you why you think that argument is stronger, to bring it in here and cook it.

**Dr Banks**—We are obliged to look at equivalent measures from one country to another just as other countries are obliged to look at ours. Having tightened up on the security arrangements, we believe that the very small decrease in security that is now presented by transporting the product domestically is offset by the added confidence that the cooking and everything else will be done correctly in this country under AQIS audit. So it is a balance there which we believe gives us an equivalent level of security.

**Senator FERRIS**—As a very modest observer of scientific procedures, I say that wherever you have got a number of steps of human intervention you raise the risk. I would have thought we wanted to minimise that risk and not give the opportunity for it. Anyway, how do you believe that the causal agent entered New Zealand?

**Dr Banks**—We do not know whether a causal agent did enter New Zealand. There is a theory that possibly another agent entered New Zealand, but that is as yet unsubstantiated. The actual cause of the problem in New Zealand has not been determined at all.

**Senator FERRIS**—You are aware that there is a view that it entered New Zealand via uncooked pig meat?

**Dr Banks**—I am aware of that view. We have had long discussions with our New Zealand colleagues on that issue and indeed we have had discussions with the investigators carrying out that investigation, who are not part of New Zealand MAF. However, as to the linkage between the outbreak and the possibility of imported pig meat, while it is interesting and we are going to be following it very closely, in discussions we have had with New Zealand MAF over the last few weeks and as late as this morning—when I spoke with them to make sure I was up to date before coming here this afternoon—that linkage is still, in their words, speculative.

**Senator FERRIS**—Let us assume that it is speculative. I still say to you: why would you want to run that risk when you do not know—you have said you do not know and they have said they do not know, but it is speculation—if that could be the causal link? I still do not understand why, until it is determined that that was not the reason for the New Zealand outbreak, we would want to run the risk in this country of bringing in uncooked pig meat which could be infected without first saying, ‘We are going to absolutely rule out that risk by cooking it offshore.’

**Dr Banks**—You are confusing the situation in New Zealand with the situation here in Australia. The purported linkage with imported pig meat was in fact with imported raw pig meat, which was New Zealand’s policy until about two years ago. Our policy has always been, since 1992, to import cooked pig meat. So there is a big difference in that respect. Furthermore, swill feeding in New Zealand is legal; it is highly illegal and very heavily policed in this country. A completely different set of circumstances pertains to the two countries.

**Senator FERRIS**—Yes, I would agree it is a completely different set of circumstances, but the fact is that at the end of the road they have got that virus and one of the likely causes—we do not know; you have said you do not know—could be the importation of raw pig meat from overseas. I still say that I am puzzled as to why we would want to leave this country open to that risk.

**Dr Banks**—We are not opening this country to that risk. Firstly, we only import pig meat that either has been cooked offshore or is cooked under tight security in Australia, and, secondly, we do not allow swill feeding. It is not a comparable situation.

**CHAIR**—Page 21 of the Australia Pork Ltd submission—

**Dr Banks**—We do not have that.

**CHAIR**—I will read it to you. It says:

Analysis conducted by the CSIRO highlights our concerns regarding the potential longer-term risks. Taking the example of PMWS, the CSIRO analysis has shown that with the measures proposed in the draft IRA the likelihood of there being one or more outbreaks (considering the median predicted values) over the next ten years as being 99% ...

Those are pretty fair odds, aren't they?

**Dr Banks**—That is actually mathematically correct.

**CHAIR**—But we do not believe them?

**Dr Banks**—It bears no relationship to reality.

**CHAIR**—Then it goes on to say:

... with the corresponding figure for 25 years or more approaching 100%.

**Dr Banks**—That is correct.

**CHAIR**—So it is a certainty.

**Dr Banks**—Absolutely. If you import a product for, say, a million years, any risk that is above zero will approach certainty. So mathematically that is quite correct and we have no argument with that. The reality is that that just does not occur in practice. Essentially, it is valid to say that with the increased volume of import as time goes by the risk increases—that is a valid thing to say. However, the situation of imports changes very rapidly. There are constant changes in disease prevalence, in diagnostic tests, in the surveillance techniques used and, indeed, in the activation of pathogens. We have to respond to those changing circumstances on a very regular basis. So, while it is mathematically correct to say that if you wait a hundred years or a million years it will happen, the reality is that we are reassessing the import requirements on a very regular basis and, if there are significant changes, we make the necessary corrective action at the time.

**CHAIR**—Do you know what CSIRO used, other than a calculator, to come to that prediction? How did they arrive at that conclusion?

**Dr Banks**—We are not disputing the mathematics.

**CHAIR**—But are you sure they only used a calculator and not some other scientific means of assessment?

**Dr Banks**—I do not know what sort of calculator they used.

**CHAIR**—Perhaps we should get them to familiarise you with their working model.

**Senator FERRIS**—Ms Harwood, have you had a chance to look at the executive summary?

**Ms Harwood**—Yes.

**Senator FERRIS**—There are a number of points in there. Rather than go through them all, would you like to respond to some of them?

**Ms Harwood**—For a start, let me say I recognise many of these comments because many of them are included in the submissions that APL has made to us already. They are matters that the panel has given very deep consideration to. In forming its final conclusions, it has looked long and hard at these issues and brought evidence to bear on them. Its intention is to have addressed these. In the final IRA report we would of course include a commentary which lists the concerns raised by stakeholders and gives specific responses to those. By way of an overall comment, these are concerns I recognise from documents from APL.

**CHAIR**—Pardon me for interrupting, but in the final report will you now go to CSIRO and say, 'What was all that about?' If they are saying there is a 99 per cent chance—

**Ms Harwood**—I would have to check that all of these things have actually been brought to us before. I am just saying that, as I read through the list, it seems a familiar list of concerns. Many of these concerns we have already covered in evidence today, including the risks associated with PMWS. I reiterate our comments from before that we have tough measures in the draft IRA that are strong enough to deal with the risks associated with PMWS and to reduce those risks to very low levels. I do not know whether there are any other specific concerns.

**Senator FERRIS**—There is one. The final sentence of the fourth dot point says:  
There is no justification in the draft IRA for onshore processing.

**Ms Harwood**—I do not believe that is the case at all. There was an ambiguity in the way we expressed the management measures in the draft IRA, which we clarified at the consultation meetings with stakeholders. But the actual substance around that, the science of the management measures, is fully argued in the draft IRA report. It was just that we did not express as clearly as we might have the actual management measures that we were proposing.

**Senator FERRIS**—If there is some more paperwork that you think more adequately explains that justification, would you be able to supply it to the committee?

**Ms Harwood**—I am sure that is a matter we are addressing in preparing the final IRA report, because we are aware of the concerns that were raised by industry in relation to that matter.

**Senator FERRIS**—It would be helpful if we could have it earlier.

**Senator CHERRY**—Are you essentially saying that the draft IRA report does support onshore processing, even though it does not say so?

**Ms Harwood**—We did not express the wording of the management measures as well as we might have. The actual scientific analysis around risk, consideration of risk management options and how they might apply is there in the draft IRA, but we take on board the comment relating to the clarity of that and we would plan to address that in the final IRA report.

**Senator FERRIS**—But this is the very essence of the draft IRA. If there was some ambiguity about it, I think this committee would like to see the paperwork that clarifies it more effectively before the final IRA comes out, because we are reporting on the paperwork as we have it in front of us. If APL believe that there is no justification presented in the draft IRA and you have now clarified it to the point where you have justified it, I think we should be able to see that material or have those documents.

**Ms Harwood**—We can certainly give you a clearer description of the management measures to clarify that issue as raised in the draft IRA. We can also point you to the places in the text where the substantive discussion around the science underpinning that is presented.

**Senator FERRIS**—I think that would be very useful, because it seems to me that is one of the absolutely pivotal points of this whole question.

**CHAIR**—At present does uncooked pork come into Australia?

**Ms Harwood**—Yes. It comes in from Canada and Denmark and is processed here in Australia.

**CHAIR**—So this risk exists now.

**Ms Harwood**—Essentially the risks that we are talking about are there. The draft IRA proposes some tightening of measures to further reduce the risks associated with PMWS. The regime that is proposed in the draft IRA report is more stringent in some ways than is the current policy.

**Senator CHERRY**—Dr Banks said earlier that the risk is reduced if the heads, the lymph nodes, the bones and I think it was the feet are removed. Would that trimming take place offshore or onshore?

**Dr Banks**—Either.

**Senator CHERRY**—So the carcass arrives here and all those things are removed. What then happens to all of those bits? Are they destroyed or are they reprocessed in some form?

**Dr Banks**—The waste from any trimming done in this country would be considered as a high-risk quarantine waste material that would be dealt with appropriately—as I said, either by incineration or by deep burial.

**CHAIR**—Do we have a specific arrangement with Canada and Denmark regarding the pork that comes into Australia at present?

**Dr Banks**—Yes.

**CHAIR**—So are we actually broadening the arrangement?

**Ms Harwood**—It assesses a range of market access requests from a range of countries. Under the proposed policy here, a number of other countries would be able to apply to bring in pig meat, but the conditions that would apply to their exports would depend on their disease status. The actual quarantine conditions would be determined according to the risks that that country poses.

**CHAIR**—Are we only one of two or three countries on the planet that do not have this disease?

**Ms Harwood**—In terms of pork producing countries that do not have PMWS, yes, that is the case.

**CHAIR**—There is Finland. Which other pork producing countries do not have PMWS?

**Dr Banks**—The South Island of New Zealand, Australia and Finland. But as Finland is part of the EU we do not necessarily—

**CHAIR**—In what ways do they protect themselves from entry? A wish and a prayer?

**Dr Banks**—I think it is fair to say that, were these to be adopted, we would be the only country in the world that would have import conditions for PMWS. No other country that I am aware of either does or in the past has had risk management measures for PMWS.

**Senator O'BRIEN**—It is a bit like Johne's disease.

**Dr Banks**—I do not quite see the similarity.

**Senator O'BRIEN**—It is a wasting disease and most countries that run sheep have ovine Johne's. It does not mean that we have it here, but—

**Dr Banks**—We have plenty of Johne's disease in Australia.

**CHAIR**—Which we imported from New Zealand, the specific state department of agriculture knowing it was doing it.

**Dr Banks**—I will not go into that debate, if I may.

**CHAIR**—Which was a serious folly.

**Senator O'BRIEN**—Page 388 states that the panel is unaware of any reports where muscle has been examined for the presence of PCV2. What does that actually mean?

**Dr Martin**—The panel was unable to find any published reports where muscle had actually been examined. However, a wide variety of other tissues have been examined, including bone marrow and of course lymph nodes. We looked at those, and of course they are associated with muscle.

**Senator O'BRIEN**—On published research, are there any areas where it does not occur?

**Dr Martin**—In the body?

**Senator O'BRIEN**—In the body, yes.

**Dr Martin**—It certainly likes lymphoid tissue: things like the spleen, the liver, bone marrow and lymph nodes. It has a predilection for those sites. It has been found in the brain.

**Senator O'BRIEN**—If no-one has examined muscle but everywhere else that has been examined has it, the question over the muscle tissue must be assessed as 'likely', mustn't it?

**Dr Martin**—The panel took the view that, if it was in lymphoid tissues, those were tissues that were associated with muscle and therefore it could be in meat per se.

**Senator O'BRIEN**—At R6 on page 389, dealing with the likelihood of the pathogenic agent not being destroyed during cold transport and storage, again you advise that there is limited data on the storage of PCV2, but the panel estimates the chances of meat remaining infected as 'high'.

**Dr Martin**—That is right, because the cold storage could either be chilled or frozen, so that will not have a significant effect on the virus.

**Senator O'BRIEN**—So it is a conservative assessment of risk based on a lack of data?

**Dr Banks**—That is correct.

**Senator O'BRIEN**—Why have you not assigned a 'high' risk classification in other areas where data is poor?

**Dr Martin**—For particular steps?

**Senator O'BRIEN**—Yes.

**Dr Martin**—It would depend on the data. As we discussed for the data on within herd and between herd prevalence, the likelihoods were assigned on the basis of what data was available. For each of the steps that we looked at, we looked at what data was available and assigned a likelihood accordingly.

**Senator O'BRIEN**—So we have a 'moderate' risk of a source herd being infected and a 'moderate' risk of a pig in the infected herd being infected, the sensitivity of ante-mortem slaughter and processing procedures in detecting and removing infected pigs as 'extremely low', the likelihood of meat harvested for export being infected with PCV2 as 'moderate', the likelihood of the pathogenic agent not being destroyed by post-mortem decrease in muscle pH as 'high' and the likelihood of the agent not being destroyed by cold storage as 'high', yet the overall conclusion was that the risk of getting an infected carcass was 'low'. Can you explain that to me?

**Dr Martin**—Mathematically, if you multiply probabilities, each step is conditional upon the other step.

**CHAIR**—But you said to CSIRO that that was a faulty way of assessing it. They were not allowed to use maths and you are!

**Dr Banks**—I am sorry; there is no comparison whatsoever.

**Dr Martin**—So, because we have assigned probability—the likelihoods—to each of the steps and each step is conditional on the other step occurring, you are multiplying—

**Senator O'BRIEN**—Do you use the top, the middle or the bottom of the range?

**Dr Martin**—No, it is samples between the distributions. You do 5,000 iterations and it samples between those distributions.

**Senator O'BRIEN**—I suppose if you keep multiplying fractions by fractions you end up with a similar number.

**CHAIR**—Can I draw the committee's attention to the fact that we are now 20 minutes over time and seek some direction from you, Senator O'Brien. I see you have a thick folder there.

**Senator O'BRIEN**—I have a thick folder and I have several other questions.

**CHAIR**—Are there some that you could put on notice?

**Senator O'BRIEN**—Let me see if I can proceed expeditiously. On page 396 of volume 2 of the import risk assessment, under the heading Environment, about halfway down the page, you say:

Because PMWS is not known to affect native Australian species, its direct impact on the environment would not be discernible at any level.

Does that mean that there has been research done and that conclusions have been reached that PMWS does not affect Australian species, or does it mean we do not know?

**Dr Martin**—We are not aware of any specific data looking at Australian animals. What is known from overseas is that porcine circovirus is generally found in pigs. PMWS is a disease of pigs. It has not affected other species—there is no evidence that other species are affected. So it is based on that data: that it seems that it is a disease of pigs.

**Senator O'BRIEN**—So it is an extrapolation that, because it has not occurred overseas and we cannot find another animal species that it has migrated to, it will not happen here.

**Dr Martin**—It is based on the data from overseas.

**CHAIR**—Has all that changed now with this Asian chook flu thing that has allegedly gone to pigs? Are there things happening out there daily that you have to keep up to speed on?

**Dr Banks**—The animal disease situation throughout the world is changing on a daily basis. Part of our job is to keep track of that. Certainly nothing stays static in this environment.

**CHAIR**—I have a note here that in Denmark there was one case of this three years ago and there are now 300 farms affected by it. Do we understand how it spreads? It obviously spreads pretty well. If we have one chink in our armour, there is a fair chance we will be—

**Dr Banks**—If the Danes were able to determine how it had spread precisely from one to another, they may well have been able to do something about it in the early stages. I suspect that they perhaps regret that they did not. But all the time that you are dealing with a syndrome of which there is still a great deal of uncertainty about the cause, I am sure you will appreciate that it is a very difficult thing to eradicate in those sorts of circumstances.

**Senator O'BRIEN**—Dr Belton, the director of Biosecurity New Zealand, says:

This has been an extremely difficult investigation because of the lack of knowledge of what causes the disease, how it could have arisen in New Zealand and its association with two pig viruses already well established here.

Presumably you have had communication with Dr Belton about these investigations.

**Dr Banks**—I was discussing it with him only this morning.

**Senator O'BRIEN**—It is very relevant to the import risk assessment process, isn't it?

**Dr Banks**—We are certainly keeping an eye on what is happening in New Zealand. We would be delighted if the New Zealanders were able to get to the bottom of this disease, but I think it is important to recognise that there have been many, many other theories proposed in both North America and Europe, where the research facilities are far greater than in Australasia. As yet, they have not come to a solution.

**Senator O'BRIEN**—The Australian industry are suggesting the New Zealand infection may have resulted from uncooked or cooked pig meat ending up in pig feed. You talked about swill feeding, so presumably you are aware of that suggestion.

**Dr Banks**—I am fully aware of that suggestion. I should point out though that the New Zealanders believe that if there is an association it is with the importation of uncooked pig meat. There is certainly no suggestion that it is associated with the importation of cooked pig meat. The New Zealand ministry of agriculture and the researchers doing the work agree on that.

**Senator O'BRIEN**—I would be interested if we could contact Dr Belton to get more information on the knowledge or lack of it about PMWS based on New Zealand's direct experience. Would it be fair to say the focus of this import risk assessment is only on PCV2?

**Dr Banks**—No, that would be incorrect. The risk analysis panel and the technical working group that was formed to advise them were fully aware of the other possible causes of PMWS and took them into consideration when making their recommendations.

**Senator O'BRIEN**—It is suggested that it may be caused by an as yet unidentified organism.

**Dr Banks**—If you recall, Senator, I mentioned earlier the five possible causes. Agent X, as we call it, is one of them, but there have been many other agent X hypotheses which as yet have not come to any conclusion.

**CHAIR**—Being a very unscientific person, as I am, with the meat that comes in uncooked and gets cooked, do we actually have at an abattoir a meat inspector there to make sure the trim does not go to someone's salami or something? Is it self-regulated, in other words?

**Dr Banks**—It is a bit of both. Certainly there is not necessarily somebody on-site the whole time, but the audits are very regular. The organisation has to enter into a compliance agreement. I have one here. It is a fairly comprehensive mechanism for ensuring a level of self-regulation, but at the same time AQIS audits them three times a year. One of those audits is totally unannounced.

**CHAIR**—Could you provide a copy of that to the committee?

**Dr Banks**—If there are no commercial-in-confidence aspects to it, I will do that. We might have to blank out a few names.

**CHAIR**—That is all right.

**Senator O'BRIEN**—I had the experience of walking onto an aircraft where one of the staff who was cleaning it walked off with food and was chastised by her colleagues as running a risk of being apprehended by quarantine. But she proceeded with the food. If it happens in a regulated area like the airline industry, what is to stop that happening with trimmings, with someone who wants to make their own sausages or salami or the like in a processing plant?

**Dr Banks**—I think the consequences of being caught doing that are far greater for a company, which would undoubtedly lose all its licences and everything else.

**Senator O'BRIEN**—I can tell you that it was a pretty big company where this was happening, but it was happening.

**Dr Banks**—The audits that AQIS undertake certainly go into looking at the way that staff behave. That is part of the audit process.

**Senator COLBECK**—Is there an agreement for every site where pigmeat is cooked?

**Dr Banks**—Yes.

**Senator COLBECK**—So that is part of the licensing agreement. Every site where raw imported pigmeat comes into the country has one of those agreements and is inspected in accordance with that agreement?

**Dr Banks**—Every site has to either have those agreements or have somebody permanently there, which is economically difficult.

**Senator FERRIS**—How many sites are there in Australia?

**Dr Banks**—I will have to take that on notice.

**Senator O'BRIEN**—Is there anything in the draft impact risk analysis that goes to the risk of onshore processing specifically?

**Dr Banks**—The whole IRA certainly takes into account the equivalency of processing either offshore or onshore.

**CHAIR**—In a practical sense—as in a freezer which monitors the temperature and has a chart—how do you know that the oven does not cool or that someone gets blotto on the job or that something goes wrong? How do you know that the cooking process is thorough?

**Dr Banks**—Part of the requirements are that there are checks on that. In most ovens, as I recall, there are thermographs that can determine whether in fact an oven is malfunctioning.

**CHAIR**—Could you confirm for the committee the process that enables someone to go in and audit today what happened yesterday?

**Dr Banks**—I will get that to the committee, certainly.

**Senator O'BRIEN**—I want to briefly touch on the porcine reproductive and respiratory syndrome virus passages mentioned on page 269 of volume 1. That is a major disease, isn't it?

**Dr Banks**—It is.

**Senator O'BRIEN**—On page 269 you advise:

The disease has spread throughout much of the pig-producing areas of the world, causing significant production losses.

You state that in the US, where vaccine is not used, nearly 60 per cent of herds are infected, while in Canada it is around 80 per cent, and European prevalence is high. That means that Australia is one of the few pig producing countries still free from this disease, doesn't it?

**Dr Martin**—Yes, that is correct.

**Senator O'BRIEN**—On page 270 you say that PRRS spreads rapidly within herds.

**Dr Banks**—Correct.

**Senator O'BRIEN**—Does that mean that once established it is difficult to control?

**Dr Banks**—Correct.

**Senator O'BRIEN**—On page 273, under the heading 'Transmission via meat' you state:

... virus has also been detected in commercially-packaged pork but only rarely and at very low titres.

On page 274 you state:

The virus appears to be stable in meat frozen for prolonged periods.

**Dr Banks**—Correct.

**Senator O'BRIEN**—On page 275, under the heading 'Release assessment', you state that the likelihood of a herd being infected is high, given how widespread the virus is. But you state that the likelihood of the virus not being detected is, if Australian processing requirements are followed, extremely low and that the chances of the agent being present in meat harvested for export are moderate. You state that the likelihood of the agent being destroyed by cold storage is high, and that all that leads to the conclusion that the risk is low of an imported carcass being infected. Can you just explain that?

**Dr Banks**—That risk still requires risk management.

**Dr Martin**—That is just part of the release assessment; that is the likelihood of infected meat coming in. We then have to look at the exposure assessment. So that is only one part of the risk. It is not the actual risk; it is the likelihood of entry. Again, it is the fact of multiplying likelihoods by likelihoods, of a fraction by a fraction.

**Senator O'BRIEN**—And that inevitably gives you a smaller number.

**Dr Martin**—That is right.

**Senator O'BRIEN**—In the section headed 'Exposure assessment', on page 277, you state:

The oral infectious dose for PRRS virus has not been determined.

I take it that that means it is not known.

**Dr Martin**—We do know some information. Biosecurity Australia commissioned research into PRRS virus. We know that 250 grams of meat collected from viraemic pigs fed over two days was able to induce infection in naive pigs when they ate it. So, although we do not know what a minimum oral infectious dose is, we do have information that the virus can be transmitted orally when it is in meat.

**Senator O'BRIEN**—It is entirely infectious?

**Dr Banks**—Yes.

**Senator O'BRIEN**—It is a persistent virus, it would spread easily and it has a significant impact on production. So, if this assessment is wrong, if PRSS arrived here it would have a dramatic effect on the Australian industry, wouldn't it?

**Dr Martin**—It would have a significant effect on the piggeries affected.

**Senator O'BRIEN**—Is it fair to say that there are significant gaps in the data available to make this assessment, that there are a number of assumptions which underpin the risk assessment in this area?

**Dr Banks**—Inevitably, when carrying out a risk assessment you do not have all the data for each step, and that is why you use expert opinion. Nonetheless, I think it is important to point out that we believed that without risk management the risk for this disease was too high. That is why risk management has been imposed. That is what the cooking is all about.

**Senator O'BRIEN**—I am not certain about that. I think we need to get this IRA right, and I remain to be persuaded that we have done that to date.

**CHAIR**—We have come to the end of our questions. Is there anything that you would like to volunteer?

**Ms Harwood**—No, but there are a lot of points in this that we could respond to.

**CHAIR**—Thank you very much for your time.

**Senator FERRIS**—When we get the evidence from APL, which is coming now, if you have any clarifications I would like to hear them. I have no doubt that they will give more detail on some of these dot points.



[5.34 p.m.]

**HALL, Dr William, Research Manager, Research and Innovation Division, Australian Pork Ltd**

**HIGGINS, Dr Paul Anthony, Chairman, Member and Delegate, Australian Pork Ltd**

**PLOWMAN, Ms Kathleen Ann, General Manager Policy, Australian Pork Ltd**

**THORNTON, Dr Eric John, Veterinary Consultant, Australian Pork Ltd**

**BARNES, Mrs Mary Bridget, Consultant Statistician, Maths and Information Sciences, Commonwealth Scientific and Industrial Research Organisation**

**PULLAR, Mr David Murray, Consultant on Risk Analysis and Import Risk, Commonwealth Scientific and Industrial Research Organisation**

**CHAIR**—Welcome. Are you going to make an opening statement?

**Dr Higgins**—Thank you. Australian Pork Ltd represents approximately 77 per cent of Australia's producers of pig meat. As well as being a pork farmer myself, I am a registered veterinarian. The industry generates substantial income and employment in rural and regional Australia, producing over \$1.1 billion in household income and employing more than 33,000 people. In recent years Australia's pork has seen one of the fastest rates of export growth for any agricultural industry, with export revenue currently valued at \$228 million.

We welcome the committee's inquiry into the draft risk assessment for pig meat. This is particularly important against the backdrop of the current disease situation we see, as has been mentioned in relation to bird flu, mad cow disease et cetera. This has highlighted not just the issue about how important these matters are for production and production costs but that the game has changed, where one of Australia's competitive strategic advantages is clearly our disease status but also our perception of that disease status, the perception of our quarantine risk as a reliable supplier. So you can imagine Japan, where we have built an important market over the last few years, reacting to the discovery of a serious disease like PMWS. Even though other supplying countries still have that disease, they would be very concerned about our reliability as a supplier and our quarantine systems.

On strong scientific grounds APL believe that the draft IRA is seriously deficient in its recommendations on the importation of uncooked pig meat from countries infected with PMWS and PRRS. If either of these diseases were to get into Australia they would seriously damage our industry and in fact would bankrupt many producers. PMWS was first diagnosed in Canada in 1996 and has since become global, apart from Australia, Belgium and Finland. It was first discovered in New Zealand only last September, as has already been discussed. It was found in Denmark, a major exporter to Australia, only three years ago and is now endemic across that country.

The cause of PMWS is not known. It is not known how it spreads. An increasing amount of opinion is emerging that it may be caused by an unknown organism. This is supported by the recent outbreak of PMWS in New Zealand, where great uncertainty reigns. We are currently making inquiries in the European Union about whether research is being done to identify this agent. We have been unable to confirm that at this stage but we suggest that the committee makes inquiries to those countries because we believe that research is going on. There is no cure for this disease. It cannot be eradicated on a national basis—a critical point that the New Zealand authorities have confirmed in recent months. This disease, PMWS, causes up to 40 per cent losses in production, with weaner pigs dying from the age of six weeks. Average losses are 15 to 20 per cent of pigs on affected farms. Overall losses in the European Union countries are estimated so far to be eight million pigs at the cost of \$1.5 billion. APL estimates the direct and indirect cost of PMWS in Australia would be 2,200 lost jobs, a \$189 million drop in gross domestic product and a \$76 million reduction in household income. To put it another way, we estimate it would add 15 per cent to the cost of production in affected herds.

The PRRS virus causes late term abortions, with up to 20 per cent losses. This has not been identified in Australia. In countries where it is present, eradication measures have been expensive and largely unsuccessful. An authoritative survey of estimated losses from PRRS in Australia shows that it would result in \$39 million in loss, a six per cent reduction in overall income. In the Darling Downs region alone, the cost is estimated at \$13 million, a reduction of 21 per cent in income.

You hear stories that these diseases are not really that important and that they are well-controlled in overseas countries. I have brought along an index from a book, which I would like to table. This concerns a conference paper I received in the mail a few weeks ago. As I said, I am a pig veterinarian in the industry, and

I am seriously thinking about no longer subscribing to any international journals from Europe or America because, as in this example, 63 pages of the 103 pages on diseases covered in this American conference paper concern PMWS and PRRS. Basically most of the information I receive is useless to me because we do not have these diseases here. So if you hear those countries saying these diseases are not important, you can ask the question: why are they devoting 60 per cent of their conference time to talking about these issues?

Because there are so many uncertainties about these diseases, particularly PMWS, Australia's pork producers urge that Australia continue a conservative attitude to the import of pig meat from affected countries. The disease outbreak expectation results indicate that, under the draft IRA Australia has proposed, even existing quarantine measures will not meet our appropriate level of production. As the draft IRA stands, the proposed risk management measures fail to reduce the level of risk to an appropriate level—that is, Australia's very low risk categorisation. While WTO rules rightly insist on scientific evidence as the basis of risk management, they do not require Australia to rely on hope, assertion or speculation to manage the risks of a new disease of an uncertain cause. Based on the draft IRA, as has already been discussed, the CSIRO has calculated that there is a 95 per cent probability of PMWS entering and becoming established in Australia in the next 10 years, based on the data within the import risk assessment and based on current import levels.

I want to clarify that we have quoted a level of 99 per cent in our submission to the committee. That is based on the increased import levels that occurred over the last quarter of last year. Even based on the IRA data itself, the risk was 95 per cent over the last decade, and we heard from Biosecurity Australia that they do not argue with that assertion. I would also like to point out to the committee that, if you read our submission, this information was given to Biosecurity Australia in October last year. Yet when questioned by this committee, they are still unable to answer and they do not know about the methodology. I would have thought that they would have investigated those issues a bit more thoroughly. Until additional causative factors are identified for PMWS and control measures developed, Australia is justified in accordance with the precautionary principle of the SPS agreement, article 5.7, in not allowing the importation of pork from PMWS affected countries until it conducts additional research regarding the cause.

On the issue of the SPS agreement, I should point out that in his letter about the free trade agreement to congress on 12 November, Ambassador Zoellick said that the US agenda on SPS issues was to have Australia eliminate unjustified SPS restrictions and to facilitate the export of US food and agricultural products to the market. I have some quotes here regarding those issues; however, the committee has already asked questions and we have discussed those, so I will leave that to one side for the moment.

Before I finish, I would like to respond to several issues that have been raised by the committee in their discussion with Biosecurity Australia. The first is that David Banks said that the cooking process may well reduce PCV2. Those were his words—'may well reduce'—which certainly do not represent a scientific assertion. Our advice, and we can table this information, is that there is no published information on PCV2 with regard to cooking or temperature reductions. We have personal communication from Graham Wilcox, who has been doing work on PCV viruses in other species. He says that 'related viruses in birds will withstand high temperatures for 24 hours'. So with respect to the arguments about leading up temperatures and high temperatures and how long they last, there are certainly no cooking processes that currently stand that are going to last for 24 hours.

The second issue concerns the comment David made about swill feeding being highly illegal and highly policed. I am not sure what the distinction between highly illegal and legal is, but there are a lot of other things which are illegal in this country that still certainly occur and there have certainly been cases of swill feeding in this country.

My last point—and I think this is a key point—is that the current protocols have been put in place to manage the risk involved with PRRS virus. As Senator O'Brien has discussed, these are cooking protocols to reduce the risk of a virus that is present in carcasses, in meat, brought into this country. Clearly those processes are in place to do so, and those processes have not been challenged in the years that they have been present in Australia, yet we have an import risk assessment which says that there is another virus or an unknown agent that may cause this disease. We have a situation where we do not believe that the cooking protocols will reduce or eliminate the virus present in that meat, and yet the import risk assessment is not going to deal with those issues. So we have a process for one virus that says, 'Here are the risk management protocols we'll put in place for that,' but we will not put those same risk management protocols in place, albeit at different levels, for a different virus. I am at a loss to explain why that is the case.

In summary, I believe that the import risk assessment, as it currently stands, is not a risk that Australia should take. I would like to ask permission from the committee to summarise our case at the end of proceedings if you have time. I now hand back to the committee to ask questions. I will be able to direct questions to my colleagues depending on where their expertise lies.

**Senator CHERRY**—The evidence from Biosecurity Australia is that we currently allow pork meat in from Denmark and Canada. Are we open to the risk of these diseases coming in under current import risk assessment rules?

**Dr Higgins**—Absolutely—that is our view. The current cooking protocols, which are recommended to be continued under this import risk assessment, are no different, so we see ourselves as being at risk right now.

**Senator CHERRY**—Do you agree with Biosecurity Australia's assertion that the draft IRA actually toughens up the process, at least for those two countries?

**Dr Higgins**—We welcome the import risk assessment process because it has allowed a formal and rigorous assessment of the PMWS issues, which were not covered under previous protocols. While Biosecurity Australia may argue that some of the transport protocols do tighten up the risk in relation to PRRS, there is certainly no tightening up of the risk involved in PMWS, which we are gravely concerned about.

**Senator CHERRY**—Your submission states that the draft IRA refers to approved offshore processing only. At what stage did you become aware that Biosecurity Australia was talking about approving both onshore and offshore processing?

**Dr Higgins**—I would have to ask my colleagues that, but our reading of the documentation that came out is that it referred to offshore processing only and that Biosecurity Australia clarified that only at the public hearings that occurred.

**Ms Plowman**—That is certainly true. I attended the first round of public consultations where we sought confirmation from Biosecurity Australia that it was in fact the case that cooking was to be conducted offshore for the disease PMWS. It then became otherwise apparent when they said, 'No, in fact we mean it can be conducted both onshore and offshore.' Our interpretation of the draft IRA was that it could only be conducted offshore. We have had discussions with other stakeholders, including the National Farmers Federation, and their interpretation of the draft IRA is that it could only be done offshore.

**Senator O'BRIEN**—Why is processing the meat offshore much less risky than onshore processing?

**Dr Higgins**—We take the view, despite Biosecurity Australia's confidence in relation to trim and waste, that there are certainly risks involved—as has been highlighted by the committee today—with trim and waste going to other products which may not be properly cooked, particularly products such as sausages and those sorts of things. Therefore, if you cook the product offshore you would totally eliminate those risks in the process.

**Dr Thornton**—I think there is an element of contingency here in this argument of offshore versus onshore processing. You can make the argument that there is some equivalence between onshore and offshore if everybody does the right thing. The problem is when people do not do the right thing, deliberately or inadvertently. In that particular situation I do not think there is equivalence.

**Senator O'BRIEN**—If I understand your submissions, there is an element of risk when we take processing onshore—processing that does not exist if offshore processing occurs.

**Dr Higgins**—That is correct.

**CHAIR**—You would have to say that it would be easier to supervise it onshore than offshore, if it had to be supervised.

**Dr Higgins**—As the committee has already discussed today, the behaviour of individuals and what happens with trim and waste is an issue for us. If we can eliminate that risk completely then we believe that is a safer process. The other main point I make as I come to the end of my opening remarks is that we have some issues around the cooking protocols themselves. That is a separate issue, of course.

**Dr Thornton**—To add again to that, all that we have just been discussing is based on the assumption that PMWS is caused by PCV2. If we are wrong about that and there is something else involved that we know nothing about, then it is hard to make any judgments at all about the relative safety of onshore or offshore processing.

**Senator O'BRIEN**—So, in relation to the offshore processing, are you saying that Biosecurity Australia has changed its view on this matter without any scientific basis to justify the shift?

**Dr Higgins**—Our original interpretation of the draft was that they were saying offshore processing. They have certainly changed that in terms of the documentation.

**Senator O'BRIEN**—Without any change to the documentation?

**Dr Higgins**—They have only changed their view on it. They have not changed, as I understand it, the underlying documentation.

**Dr Thornton**—My reading of the draft IRA was that nowhere was there any discussion of the pros and cons of offshore and onshore processing. Risk management was addressed in terms of offshore processing and, as far as I could see, it was left at that.

**Senator O'BRIEN**—We are focusing on PMWS and PRRS, but there are other diseases that you regard are not properly considered in the draft import risk assessment. You say on page 10 of your submission at 5.1.1:

A widely accepted hypothesis is that PMWS only occurs if some other triggering agent accompanies PCV2 infection, although this agent is yet to be identified.

Can you provide us with more detail: who has put this forward and what is the basis for it?

**Dr Thornton**—There are two papers that I would like to refer to. One is a review by Dr Greg Stevenson from the US. His conclusion was:

PCV2 is the essential infectious cause of PMWS, but is not likely a primary pathogen in the conventional sense. PCV2 is best viewed as a ubiquitous secondary pathogen that can cause disease given adequate co-factors and susceptible hosts. The problem is, we do not yet recognize all possible co-factors nor do we understand the determinants of host susceptibility.

That is one paper on which we based our conclusions; the other is a paper by Dr Roger Morris from New Zealand. He said:

A fundamental difficulty with the view that PCV2 is the primary cause of the disease is that this agent can be found in almost all pig herds throughout the world (including Australia), and virtually all pigs become infected with this virus after weaning, yet PMWS as a disease has behaved as a propagating epidemic which has moved between countries ... and has spread progressively within newly infected countries.

So both those papers—there have been others as well, but they are focal papers—are contributions on which we base our assessment that the argument that PCV2 alone is the cause of the disease is not really sustainable.

**Senator O'BRIEN**—So if there is another factor in addition to PCV2 that is yet to be identified, what you are saying is that we should get the science done on that before we tick off imports in the way it has been done.

**Dr Thornton**—The draft IRA has addressed that. In terms of possible transmissible agents, there are two possibilities: one is that in Australia we have a non-pathogenic strain of PCV2; the other is that there is another, unidentified pathogen involved in PMWS. In the draft IRA, in terms of risk management, only the first possibility is addressed.

**Senator O'BRIEN**—And that would be consistent with our obligations under WTO?

**Ms Plowman**—We believe the advice that we have sought legally is that the current draft IRA protocols are consistent under our SPS obligations, and the concerns and protocols that are being proposed as an amendment by APL are also consistent with Australia's SPS requirements. I can table that information for you if you like.

**Senator O'BRIEN**—That would be useful.

**CHAIR**—There was some other paper you referred to in your opening statement, Dr Higgins, that you were going to table.

**Dr Higgins**—Yes. That is just the index from the conference paper.

**Senator O'BRIEN**—You are also saying that AUSVETPLAN would not work if this disease made its way to Australia; it is your view that an outbreak could be quarantined and then eradicated.

**Dr Higgins**—If so, that would be the first time it has happened in the world.

**Senator O'BRIEN**—You refer to the fact that this disease is not in Australia, but that claim has been questioned. Given the nature and impact of PMWS, surely we would know if it were in the Australian pig herd, wouldn't we?

**Dr Higgins**—I believe so. The issue is that it is not a disease you can survey for in a serological or blood test sense because of the multifactorial nature of the disease. So it is not possible to look for it in that way. We certainly have people on the look-out for it. Bill can probably tell you about it.

**Dr Hall**—I was funded for two projects—one with the New South Wales Department of Agriculture, in which they were specifically looking for the clinical manifestation and ultimate diagnosis of this condition. We have also had a project with Murdoch University for the past three years. Part of that project has been to specifically look for the criteria that adequately define PMWS. So far we have not been able to meet those diagnostic criteria.

**CHAIR**—Is it a mandatory reporting regime?

**Dr Higgins**—It is an exotic disease, so, speaking as a veterinarian, it would be notifiable. The disease profile that occurs in affected farms is so serious and so obvious that it is almost impossible to believe that a farm would be suffering these sorts of losses and not be having an investigation. I have certainly been involved in one farm that had some issues where the consulting veterinarian to that farm—I am the consulting veterinarian—put in samples and had diagnostic work done, and it was ruled out as the cause of the problem. So these things are going on all the time.

**CHAIR**—Did you find out what the cause was?

**Dr Higgins**—I had a different view from the other veterinarian. My view was that it was a management issue in the process. We changed some things and fixed it.

**Senator O'BRIEN**—With respect to cooking schedules for PMWS, what you are saying is that work needs to be done on a schedule before the import risk assessment is ticked off. How critical is this issue?

**Dr Higgins**—As I said before, the issue of how the protocols deal with PRRS is about the cooking protocols clearly being sufficient to inactivate the virus. In this case, we do not know. But, as I said before, similar viruses in the same families actually infect avian species. In relation to the example I gave before, I talked to that person, Graeme Wilcox, individually the year before. The only reason we have that data is that someone accidentally left the heat bath on overnight and left some viruses for 24 hours. Just as a joke, actually, they cultured those out and they got 100 per cent of the virus back out again. So there are some serious questions to be asked in relation to how long this virus will survive at high temperatures and what cooking protocols will be required to eliminate it. Given the history of our protocols for PRRS, as I said before, I am at a loss to explain why we would not put similar protocols in place to manage the risk of this virus.

**CHAIR**—How would you compare this to, say, foot-and-mouth in terms of management?

**Dr Higgins**—Foot-and-mouth is clearly a more serious disease in relation to a multi-species effect, but in terms of the amount of losses that would occur, the combination of PMWS and PRRS would be a similar level for the pig industry.

**CHAIR**—There are plenty of piggeries around, shall I say, that are not registered. So, although you say it is mandatory reporting, there are a lot of piggeries around that run 10 pigs or a few feral pigs. If you go up the north-west coast of Australia you will find a few communities up there that still feed—

**Dr Higgins**—That is certainly true.

**Senator O'BRIEN**—You might recall that this committee looked at the issue of cooked chicken imports in 1996 and found that then AQIS had misinterpreted data and produced a time temperature schedule that was not satisfactory. The end result was more research before the right system was established. Given that experience, I think we are aware of the importance of getting this correct even if it takes time and money. It was a central issue to that import risk assessment. Is it fair to say that it would be appropriate for such a testing regime to occur before a decision was made about a time temperature regime for this disease?

**Dr Higgins**—I will answer that in two ways. Clearly we think that research needs to be done to properly look at the risk management processes for this disease. Again, that is assuming that PCV2 is causing this. We still have another theory in terms of agent X. Secondly, as Senator Cherry said before, we are at risk of this disease right now. If we go back to our previous discussion about the CSIRO modelling, with a 95 per cent or 99 per cent probability, depending on which number you wish to pick—but neither of them very different from each other—of the disease entering in the next decade, I do not really want to sit around with this gun to my head over the next two or three years while this stuff gets sorted out.

**Senator O'BRIEN**—Perhaps someone could explain to me why Biosecurity Australia managed to multiply all of their fractions—that is, the probability fractions—and come up with a much lower number but suggest

that your method leads to an inevitable 95 per cent to 100 per cent outcome? Can somebody explain that for me?

**Dr Higgins**—I did not quite understand David Banks's assertion about mathematics versus reality, so maybe I will hand over to the CSIRO people to explain their methodology and what they have done.

**Mrs Barnes**—In the draft IRA, BA reports—and encourages everyone to report—the annual likelihood. If instead you go for a 10-year likelihood, as we have been quoting—that is, looking over a period of 10 years—you basically just multiply by 10 the number of waste units that are going to be exposed to the different exposure groups and then run the simulations as spelt out by Biosecurity Australia. That is why you got a much bigger number. It obviously did not multiply itself by 10. I think the original annual likelihood was a 25 per cent chance that you were going to get something if you combined over all three exposure groups, whereas, within 10 years, you have a 94 per cent or approximately 95 per cent chance. As to the level of detail, I do not quite know whether I should go through the formula used or anything else.

**CHAIR**—I do not think we would know what you were talking about!

**Mr Pullar**—We might confirm a couple of points about this. There is a very nice piece of software that Biosecurity Australia use called @Risk. It is a piece of software that sits on my friend's computer. Effectively what we have done in the past is try to simulate exactly the same approach that Biosecurity Australia have used, even though they have not shown any workings. Effectively we go through exactly the same procedures as spelt out in the methodologies and developed in the issues paper, and as identified in the draft IRA

By and large, we can get the same sorts of results, but there are some interesting anomalies. It is interesting that, when you take PMWS itself and say, 'Let's look at it under the restricted risk'—that is, with the protocols in place—and consider what the impact is from looking at those three or four exposure groups together.' The result as we have described it is not put in exactly the same way in the draft IRA. Generally it is combined with the consequences. We have stopped short of that. We have just looked at entry and exposure, which are the first two parts of the overall process.

By combining the four exposure groups, the answer that then comes out is that the annual risk is about 25 per cent. We say that is all very well, but let us look at the longer term, because, if imports commence and the volume of trade continues at the sorts of values that Biosecurity Australia are putting forward, that risk is going to be higher over a longer period. If you take a 10-year period, as Mary has pointed out, the likelihood over a 10-year period is that it would be a 95 per cent risk.

The reason there is a slight difference with the 95 per cent to 99 per cent in the submission is that we have modelled it on two slightly different levels of volume of trade. The 95 per cent figure lines up perfectly with the volume of trade figure that we used from Biosecurity Australia. As was explained earlier, the volume of trade which APL and the industry believe is more representative of what will happen in reality lines up with the 99 per cent risk over the 10-year period.

**Dr Higgins**—I am a bit like you, Senator—mathematics wise, I am not sure that the difference between the 95 per cent and 99 per cent risk in the next 10 years is much of an issue for discussion.

**Mrs Barnes**—I would like to add to my answer, which I did not quite finish. This calculation was what we call a restricted risk. It had the change in probabilities that you would get after you cook and after the tenfold waste reduction. It also brings the actual distribution that comes from the first likelihood calculation you make. In our submission we also mentioned that we would really like to carry through the distributions with its inherent variation rather than just using the category, and then take the category on further. But that also can mislead in that you do not take along everything that you have calculated from the entry onto the exposure steps when you go through the feral pigs, backyard pigs and small commercial piggeries. When I have done the 10-year calculation, I have assumed that the tonnage would be flat and that it would be identical every year. I have not allowed for, as would probably happen with imports, the fact that it would inflate each year. So it is conservative in the sense that it is giving us 95 per cent with the assumption that your imports stay level at the predicted rate.

**Dr Higgins**—If we could pop along to the casino with a 95 or 99 per cent probability, I would be happy with both of those.

**Mrs Barnes**—As with a lot of other diseases, we found that with this particular one the feral pigs were the most likely exposure group. You have just alluded to the fact that people know that people feed feral pigs—that it is quite a common pathway.

**Dr Higgins**—I would like to reiterate that we supplied this information to Biosecurity Australia in October.

**Senator O'BRIEN**—Is this risk based on one disease? Are you talking about multiple diseases or just one disease with these statistics?

**Mrs Barnes**—It is for one disease. It is just for PMWS.

**Senator COLBECK**—Could you go over the section where you were talking about the inclusion or exclusion of the cooking and the reduction in waste?

**Mrs Barnes**—Regarding PMWS, for pig meat to be imported, the risk management strategies suggested by BA were cooking the pig meat and the tenfold waste reduction—I am going to have to remember the details for that. We did the simulations quite some time ago. Does anyone else recall?

**Dr Thornton**—The procedure that they talked about was deboning. It was then processed by either cooking or curing. Thereby, the proportion of pig meat purchased by us that was discarded as waste would be reduced to one-tenth of that estimated figure under restricted risks.

**Senator COLBECK**—Was that if the pig meat was cooked offshore?

**Dr Higgins**—No, this is under the current draft protocol, cooked onshore. Basically, as I understand, these guys have taken the existing draft recommendations and put them through their model.

**Senator COLBECK**—Okay.

**Mrs Barnes**—It is probably worth noting that there is not a great deal of tonnage coming in from Canada and Denmark of uncooked pig meat at the moment. Would that be correct?

**Ms Plowman**—It is frozen.

**Dr Higgins**—It comes in frozen uncooked.

**Mrs Barnes**—Sorry. I probably did not help with anything.

**Mr Pullar**—If it would assist the inquiry, perhaps we could prepare a statement of the way in which the calculation was done and provide that to you.

**Senator O'BRIEN**—That would be very good. Thank you.

**Mrs Barnes**—The point that I was trying to allude to and that I obviously did not get across very well was that the reason why we have not actually seen the disease already, given that we are currently using certain risk management strategies, may just be related to the very small tonnage that that actually entails. It was said before that, mathematically, eventually if you go for long enough you are going to get something near 100 per cent. Certainly we had the inverse: if you have only got a very small sample, the fact that it does not have disease in it does not prove that you will not have disease if you have further tonnage.

**Senator O'BRIEN**—It just might take longer to get there.

**CHAIR**—Doesn't that beg the question: how much do we bring in?

**Dr Higgins**—Let me clarify that that is not exactly how I would understand it. The levels last year were—I do not know exactly—around 52,000 tonnes of imports. So there are several factors involved in why we have not got this disease already. The first of those is that the import levels have grown over the last period of time. And PMWS has only been present in some of these countries for a limited amount of time. There is an argument that says: the risk is 95 per cent, but after five years we have not got it; therefore there is no risk. That is akin to standing outside your house and saying, 'It hasn't burned down in the last decade, so I won't insure it anymore.' That is probably quite relevant to Canberra, I guess. But, as I said before, I do not really want any delays in this process, because I feel, as a producer and representing our members, that we stand in this risk right now. If we already had it we would not be here talking about it, so it is a circular argument to say, 'You haven't got already, so don't worry about it.'

**Senator COLBECK**—What was the basis of choosing 10 years for your time frame?

**Mrs Barnes**—We have only reported 10 years, but we did, I think, 10, 25, 50, 100. We just wanted to look into the future and how long it would be. We were actually discussing this morning the relevant time period that we should look at. Of course, that is arbitrary. It could be suggested that we look 100 years in the future. It could be suggested that we want Australia to be disease-free or as close to disease-free as possible for the greatest length of time possible. Perhaps with different diseases that time period varies. Perhaps for foot-and-mouth disease we want it to be 100 years. We really do not want to expect to have an outbreak of it within, say,

a century. But perhaps there are other diseases that we are willing to have an outbreak of and then have to contain within a short time period.

**Ms Plowman**—When we are discussing this, obviously the amount of science and the data we have available in Australia and internationally would influence what those are, going beyond an annualised year assessment. As mentioned, for a case like foot-and-mouth disease, where we have been free for over 100 years, it would not be unreasonable to expect, at the very least, 50 to 100 years in freedom. For a case like PMWS, where we have no infection here, I think 10 years is very conservative, but you would have to look at each disease, whether we have been free for a long time or whether we have area freedom ourselves.

**Senator COLBECK**—By the same token, if you play the same Tattsлото numbers every week for 100 years, your odds of winning are a lot better, aren't they? It is a matter of picking a reasonable time frame. That is why I asked: why pick 10 years versus an annual one? There is obviously a difference between those, and that factor is one of the things that brings the difference between the 25 and the 95 that we are talking about.

**Dr Higgins**—Our view was—and these guys did the numbers and the whole lot—once you get to 10 years, why bother arguing whether it is going to be 99.8 per cent instead of 99 per cent after 25 years? It is an irrelevancy.

**Mr Pullar**—Just to clarify that point about the tenfold reduction: the reference to it is on page 744 of the draft IRA. Dot point 2 describes the restricted risk steps:

- if product was processed by cooking or curing and deboned, the proportion of waste discarded was estimated to be one tenth of that estimated for the unrestricted risk.

**Senator COLBECK**—Really what I was trying to clarify was inclusion or exclusion and under what protocol we were talking about, but that was covered for me. Thanks.

**CHAIR**—Just for the record, what would satisfy the industry that this would absolutely minimise the risk?

**Dr Higgins**—There were several issues, as Senator O'Brien discussed before. We want cooking protocols in place, whether offshore or onshore, that are adequate from the point of view of dealing with the risk of PCV2. Our position at the moment, given the unknown cause of the disease and the way it has spread across the world, is that the precautionary principle would say that you do not import any of this product until you know what is going on. Once those things are known, the argument or position that the industry would want to put forward would be for a proper cooking protocol that takes on board the risks involved with the viruses that have not been assessed in this import risk assessment and an offshore processing process that actually reduces the risk involving waste and trim.

**Senator FERRIS**—Chair, I am sorry; I had to go to a whips meeting. The questions I want to ask are related to the points in the executive summary that I raised with Ms Harwood. If those points have been dealt with and covered—

**CHAIR**—Give them a fly and see.

**Senator FERRIS**—In particular, the final sentence of the fourth point up from the bottom says:

There is no justification in the draft IRA for onshore processing.

Ms Harwood responded to that point by saying that in fact there may have been some lack of clarity, shall we say, in the statements that were in the draft IRA and that they have subsequently been clarified by language but not by intention—in other words, what was originally intended is still intended. Have you become aware of any additional matter related to that and, if so, does it satisfy the concerns that you have raised in that point?

**Dr Thornton**—When I first read the draft report in relation to this particular matter, I was looking for a discussion on the pros and cons of offshore versus onshore processing. As far as my reading of the document is concerned, I cannot see any discussion like that. What was addressed in the draft IRA was a risk management protocol that involved offshore processing. Subsequently, at public meetings, that was reversed and it was allowed that either offshore or onshore processing could be allowed. To my knowledge, we have received no justification for that decision either.

**Senator FERRIS**—So you are still not satisfied, in other words?

**Ms Plowman**—No, we are not satisfied.

**Senator FERRIS**—What would it take for you to be satisfied?

**Ms Plowman**—I think we have in part answered those questions—



**Senator FERRIS**—If you have answered them, do not worry. I apologise; I did have to go and chair a whips meeting. I am very sorry that I was not here.

**Ms Plowman**—In our summary, we will actually just quickly go over some of those points.

**Senator FERRIS**—Okay. I think you were here when I was questioning Ms Harwood and her colleagues about the fact that there appeared to me to be a number of steps which could have human intervention at any point in the shipping in of a pig carcass—obviously in an uncooked form—and then the disposal of bones, lymph glands, heads and so on before the cooking process, which could take place onshore. In my own mind I still have some questions about why you would ship in whole raw carcasses and then, having agreed that it would lower the risk if they were being cooked, remove in their raw state a number of pieces of, shall we say, body parts and then go through a disposal process, all of which includes human intervention at any point. Is that part of the concerns that you have about onshore processing?

**Ms Plowman**—Senator, I think you have raised a very important point about what can go wrong when you have a series of steps that require human intervention. We have detailed some of those concerns in our submission. At a later stage, I will get Eric to clarify some of the points about the removal of trimmings et cetera to meet BA's proposed protocols. I would like to point out to the committee that in Australia we seem to have a quarantine requirement that when we bring in grain it can only be treated or devitalised at the port of entry, yet we are quite willing to allow pork imports to be transported all over Australia to the required processing plants. Admittedly AQIS inspects those, but I would like to point out that last year or the year before a whole pallet of pig meat went missing. In fact, it was not delivered to the licensed premises when it came in on the docks. It was at the wrong place; it went missing. To my knowledge it has never been recovered. So I think that is a perfect example of your point about the risks involved because of human intervention. I certainly think that, until we resolve these issues regarding PMWS, we should have this product cooked offshore.

**Senator FERRIS**—Looking at Canadian salmon, which this committee also examined, it comes in headless, skinless, boneless and gutless. I wonder why it is that we can—

**Senator O'BRIEN**—It did not always happen that way, as your colleague Senator Colbeck would remind you. In fact, it was delivered to Tasmania—

**Senator COLBECK**—That was Norwegian salmon.

**Senator O'BRIEN**—Norwegian salmon did not comply.

**Senator FERRIS**—The principle is that we require all of that offal, if you like, to be removed from the fish because of the disease risks that are admitted to be likely in those fish, yet we are saying there is some small risk that uncooked pig meat could contain a strain of a virus which is not in this country, and we will allow the whole carcass to come in in an uncooked state and then allow human intervention to bury or dispose of the body parts. I must say that this is an issue a great concern to me and the answers that I have received did not reassure me.

**Dr Higgins**—I do not believe that that is actually what is happening. I think that Biosecurity Australia may have misled you slightly.

**Ms Plowman**—The lymph et cetera and bones are removed offshore before the product comes in; nevertheless, meat does arrive in Australia and is sent around to the processing plants in different capitals.

**Senator FERRIS**—Does it come in with the bones in?

**Ms Plowman**—It can, under the current protocols that exist for PRRS, come in with the bone in. Those protocols exist for the PRRS virus.

**Dr Thornton**—I think Dr Banks said earlier that, under the proposed new protocols, deboning could occur offshore or onshore.

**Senator FERRIS**—That is what I understood him to say. I do not have any further questions.

**Dr Thornton**—I could add something that I mentioned earlier which you missed out on. It appears to me that you can make an argument that onshore processing and offshore processing are equivalent if you assume that everyone is going to do the right thing all the time—year in, year out. But if you remove that caveat and you assume that some people either inadvertently or deliberately are going to do the wrong thing from time to time, then there is a significant difference in principle.

**Senator FERRIS**—Unfortunately South Australia, the state in which I live, had an experience where salami was not produced according to protocols and health standards and deaths were involved. I always worried about risks associated with human intervention, despite pieces of paper that might be signed. Again, I apologise for my absence, but was the New Zealand issue fully explored?

**Ms Plowman**—We touched briefly on New Zealand. We have certainly been in contact, like Biosecurity Australia, with the New Zealand pork industry, who are part of this technical group, and international experts that have been brought together to examine why PMWS emerged in New Zealand. My understanding is that there has to be some reconciliation of opinion between New Zealand MAF and the industry itself. The industry holds a strong view that PMWS was caused in New Zealand from an unknown agent, and they believe that that window occurred between 1998 and 2001. We have commented upon that in our submission.

**Senator FERRIS**—Thank you. Do you have the answer, Chair?

**CHAIR**—Yes. As I understand it from Biosecurity Australia, the present arrangements are that it is bones and nodes out before they get here.

**Senator FERRIS**—Yes, but what about under the new protocol?

**CHAIR**—It is the same.

**Senator FERRIS**—So feet on, bones out, head on, nodes out?

**CHAIR**—Dr Higgins, did you want to make some sort of a settlement statement?

**Dr Higgins**—Yes, please. I just want to summarise our concerns. Firstly, we are concerned that the methodology of the IRA process has moved away from conservative assumptions that underpin our quarantine system. Secondly, there are a lot of gaps, uncertainties and unknown science with PMWS and PRRS, and the draft IRA really skirts around these issues: it ignores them and also compounds these problems with the methodologies that they have carried out. Thirdly, the proposed risk management measures fail to meet ALOP, the appropriate level of protection—in particular, the unknowns around the survivability of PCV2 and/or the unknown cause of PMWS—so we are faced with a larger risk than in current import protocols. In light of these concerns, we would ask the Senate inquiry to recommend that Biosecurity Australia release a written draft IRA that specifically addresses these concerns and that, at a minimum, the report undertake a fully quantitative risk assessment.

**CHAIR**—Do Biosecurity Australia want to come forward and put that on the record?

**Senator FERRIS**—It is on the record, I think.

**CHAIR**—No, it will not be recorded.

**Senator FERRIS**—I think Dr Banks said what it was originally. It is in the evidence, I think.

**CHAIR**—I thank the Australian Pork Limited witnesses. If Biosecurity Australia want to return to the table to clarify anything, I invite them to do so.

[6.28 p.m.]

**BANKS, Dr David John Douglas, General Manager, Animal Biosecurity, Department of Agriculture, Fisheries and Forestry**

**HARWOOD, Ms Mary, Executive Manager, Biosecurity Australia**

**MARTIN, Dr Robyn Gail, Manager, Non-Ruminants, Animal Biosecurity, Biosecurity Australia, Department of Agriculture, Fisheries and Forestry**

**MORRIS, Mr Paul Charles, Executive Manager, Market Access and Biosecurity, Department of Agriculture, Fisheries and Forestry**

**CHAIR**—I welcome Biosecurity Australia back to the table. I understand that Senator Ferris has a question.

**Senator FERRIS**—Thank you, Ms Harwood. I am seeking clarification, because I think there is a little confusion about the way in which pork meat currently enters Australia and the way it would enter Australia under this new draft IRA. Could you please clarify that for us?

**Ms Harwood**—Yes. Currently, pig meat entering Australia for processing or imported pig meat has to be bone out, so the bones are gone and it is just lumps of flesh.

**Senator FERRIS**—And the head is off?

**Ms Harwood**—Yes, because that is full of—

**Senator FERRIS**—And the lymph nodes are out, and the feet are off?

**Ms Harwood**—There is not a specification saying the lymph nodes have to be out in the current policy, but the current commercial practice by the way it operates removes the major nodes. In the draft IRA report it is more explicit on the matter of the removal of lymph nodes as a required measure.

**Senator FERRIS**—Is that the only change to the import protocol for bringing in meat?

**Ms Harwood**—We talked through other changes. One of the matters that I wanted to respond to was that the draft IRA proposes restrictions in terms of the movement, transport and security of pig meat that is going to processing. That means that in fact pig meat cannot be travelling long distances in Australia. It is coming to the closest port of entry and more secure arrangements are required for how that meat is transported, and the ‘bone out’ requirement is still there. I hope I have clarified that.

**Senator FERRIS**—Just picking up on Ms Plowman’s point about a pallet of raw pig meat going missing on the waterfront, whilst I understand that may be somewhat out of your control, are there protocols in the new IRA to deal with the supervision of pork meat, once it hits the wharf, to make sure that it does not disappear? In other words, does it have to land into a secure environment?

**Ms Harwood**—Yes. It would be subject to normal quarantine entry processes and approval processes for entry of product into Australia that is subject to quarantine conditions. I would also make the point that the IRA addresses risk in a very conservative way so that, essentially, it has safety margins around the management of risk which mean that, if there were the odd incident of that sort, that is not going to prejudice the management of risk overall.

**Senator FERRIS**—Were you are aware of the disappearance of a pallet of uncooked pork?

**Ms Harwood**—Personally, no.

**Senator FERRIS**—Would Biosecurity Australia be automatically notified when something like that occurred, since it would trip, I imagine, a series of events in relation to risk?

**Ms Harwood**—It would be a matter for the operational arm of AQIS, which is responsible for implementing the protocols and for the enforcement of quarantine regulation and law. In terms of regulating something like that, the actual enforcement around an incident like that is carried out by AQIS.

**Senator FERRIS**—And you wouldn’t automatically be informed of that?

**Dr Banks**—I was made aware that that pallet had gone missing. I understand that a barbecue and gas tank went missing at the same time.

**Senator FERRIS**—Certain conclusions could be drawn as to how that pig meat may have been cooked!

**Dr Banks**—Possibly.

**Senator FERRIS**—On a serious note, though, this begs the question as to how pallets of this nature, containing what we have all agreed is a possible risk, can arrive in this country and go missing. I suppose they are questions that as a committee we can ask when questioning AQIS in the estimates process. It seems to me that, again, the issue of human intervention in any process like this means that you cannot manage the risk 100 per cent.

**Ms Harwood**—But we are working in a managed risk environment. Normal trade and movement of people mean that some element of risk is accepted by the general population and the government.

**Senator FERRIS**—I think that the pork producers of Australia would say that it would be a great deal simpler to cook the meat offshore and then that risk can never be activated.

**Ms Harwood**—We have discussed before the issues relating to equivalence and also the fact that, if the processing is happening onshore with the advantage of audit arrangements and Australian regulation and control, and secure arrangements around the transport and security of that product, those are legitimate issues to be considered and also ones that can be raised by trading partners in terms of the relative risk and comparison of risk or equivalence of risk between those two situations.

**Senator FERRIS**—I do not think you have convinced the pork producers.

**CHAIR**—I presume the meat comes frozen in containers. You would nearly have to pinch the pallet after it got to where it was going to be processed. Is the container broken open at the wharf?

**Dr Banks**—Perhaps the best thing to do is for us to get more information for you on that particular incident. As Senator Ferris has mentioned, there is the opportunity later on this month to bring that up at Senate estimates.

**Senator FERRIS**—Next week, in fact.

**CHAIR**—There is obviously a bit of a culture in most industries where a bit of whatever the boss makes goes home, in the kick.

**Senator FERRIS**—I do not think we should explore that area tonight.

**CHAIR**—I just wonder what the risk is. Thank you very much for your attendance. This will all be available in a very interesting *Hansard* in due course.

**Ms Harwood**—I do not want to delay you, but I have a comment to make on some of the commentary around the statistics and so on. We certainly are aware of the concerns expressed by APL, and in the analysis the panel has been doing in recent months they have taken those on board and considered them in great depth, so they will be addressing them. But some of the conversation around the estimates was confusing matters of likelihood with matters of overall risk. I just make the comment that it is important to compare like with like if we are discussing relative risk. That argument applies as well to the multiyear scenario issue that was being raised, but we will address that issue in the way the analysis is presented.

**Senator FERRIS**—Thank you.

**CHAIR**—Thank you very much for your attendance. That draws this session of the committee to a conclusion.

**Committee adjourned at 6.36 p.m.**