

**REPORT OF PROCEEDINGS BEFORE**

**STANDING COMMITTEE ON STATE DEVELOPMENT**

**INQUIRY INTO THE USE AND MANAGEMENT**

**OF PESTICIDES IN NEW SOUTH WALES**

**At Lismore on Wednesday 4 August 1999**

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**The Committee met at 9.30 a.m.**

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**PRESENT**

**The Hon. A. B. Kelly (Chairman)**

**The Hon. I. Cohen**  
**The Hon. J. R. Johnson**

**CHAIRMAN:** Under Standing Order 252 of the Legislative Council any evidence given before the Committee and any documents presented to the Committee which have not yet been tabled in Parliament may not, except with the permission of the Committee, be disclosed or published by any Member of such Committee or by any other person. Copies of the guidelines are available on the side table.

*Motion by the Hon J. R. Johnson agreed to:*

*That, in accordance with the resolution of the Legislative Council of 11 October 1994, the Committee authorises the sound broadcasting and television broadcasting of its public proceedings held this day.*

**RICHARD GEORGE STAPLES**, Councillor, Byron Shire Council, affirmed and examined:

**CHAIRMAN:** Cr Staples, what is your occupation?

**Cr STAPLES:** Shire Councillor, landowner and farmer.

**CHAIRMAN:** In what capacity are you appearing before the Committee?

**Cr STAPLES:** As shire councillor.

**CHAIRMAN:** Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

**Cr STAPLES:** I did.

**CHAIRMAN:** Are you conversant with the terms of reference of this inquiry?

**Cr STAPLES:** I am.

**CHAIRMAN:** If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into confidential session. However, I should warn you that Parliament may override the Committee's decision to keep matters confidential and make the evidence public. Would you like to make a brief statement before members ask you questions?

**Cr STAPLES:** Yes. I will start by setting the scene. I am a councillor on Byron Shire Council. Byron shire has probably got a lot in common with its neighbouring shires in that it is a very attractive area for settlement. We have had a lot of movement in the last 20 years from urban areas, particularly from Sydney but other cities and other urban areas of Australia, of people moving to the North Coast. We have a burgeoning population.

In particular, we have people who want to move here for lifestyle reasons: people who tend to be asset rich but income poor and who enjoy perhaps the finer things of life,

who have been in the rat race and want to move on and perhaps explore other ways of spending their lives in what they see as more productive ways. This is great in a lot of ways, but it also creates conflicts.

A lot of people want to live in rural areas, and there are all types of models and patterns of people doing that – through alternative living arrangements, multiple occupancies, community titles – and also through regular rural living. Of course, I am focussing on the rural living here because of the conflicts that can occur.

If we look at the regional environment plan for the North Coast, it talks about protecting agricultural resources from incompatible land uses nearby. Just about all of the conflicts that I have become aware of between agriculture and human settlement in this area have related to the use of chemicals and pesticides. There has been a little to do with noise, dust, traffic and a few other things, and people are concerned about water pollution from intensive animal industries, but the huge swathe of concerns that I get constantly from constituents relate to chemical use and about the effect of those chemicals on human health and on the environment.

There have been attempts by the Environment Protection Authority to address this. There was a rather futile attempt at mediation to do with banana spraying by air at Middle Pocket last year, which I was part of. Cr Coman, another councillor from Byron Shire Council, was part of that mediation. I don't know how much the Environment Protection Authority spent – it was probably well over \$50,000 – but it was futile. Basically, it was an attempt to put out a bushfire. As far as I could see, it was not aimed at getting towards any reform or any real solutions to the problem. In fact, the agreement was not even signed off in the end. So it was a bit of a joke, really.

Kathy Vail, who is also here today, will also mention that mediation. She was part of it, and has been affected by the issue. It is ironic that you have a situation where you have a banana industry on the North Coast that has just about folded, and even the Department of Agriculture does not want people to grow bananas in some of these areas because of bunchy-top, and yet there are farmers who are hanging on to an uneconomic industry and who are spraying incredibly small areas of bananas by air.

I mean, aerial spraying on cotton, where you have 600 acres of flat ground, makes some sense. But, we have got a small valley, with katabatic winds blowing down slopes, with kids getting on buses next to people who are spraying early in the morning – because the aerial spraying has to happen early in the morning, apparently. Of course, there are other alternatives to these kinds of things.

I don't dispute the farmer's right to make decisions, but there is a principle involved. The principle, which does not seem to be coming through, is that people have a right to clean air and clean water on their own properties. The legislation, which still seems to be hanging on in this State, seems to give farmers the right to pollute their neighbours. I do not agree with that, and I don't think our council is very happy about that either.

Our council passed a resolution a few weeks ago expressing concern at the problems associated with rural residential and agriculture and conflicts that arise from that situation. Basically, in my books, it comes down to the generational change. Some of these farmers involved admittedly are getting on in years. You can't expect people to change their spots overnight. There are a lot of solutions to pesticide use in what might be

called traditional agriculture – and I don't see anything traditional about pesticides use, because it has only been around for a couple of generations, and we fed ourselves for a millennia before that without chemicals, and yet we hear a lot of people saying, "There are no alternatives."

I am also council's delegate on the Far North Coast County Council, which is a regional weed-spraying authority, if you like. I call it that consciously. There is an incredible bias towards chemical use within the county council. Basically, I feel like a complete stooge being on that organisation. The county council is a creature of the Department of Agriculture and we have virtually no say in determining policy. The Department of Agriculture rules the roost. Any substantive decisions are made by New South Wales Agriculture. We get agendas on trying to decide whether the General Manager should get a Prado or something else when he upgrades. We call it chook feed. We get fed a lot of chook feed.

I will go to some of the issues involving the county council. There was a big push last year – and it was unclear where it was coming from – basically to outlaw camphor laurel. Camphor laurel is one of the main elements of the landscape on the North Coast. It is a plant introduced from China about 100 years ago. It is very common in Byron shire, and it is quite common throughout the Northern Rivers.

There was a big push to get it declared as a noxious weed. I was one of those who successfully fought strongly against that campaign for Byron shire. Byron shire has been exempted from that attempted listing. I understand the county council and the Noxious Weeds Advisory Council are still trying to get camphor laurel listed with the Department of Agriculture, unsuccessfully, because of concerns of the Department of Land and Water Conservation – concerns about, particularly, degradation of stream banks.

The reason I mention this is that I don't see a great push within the farming community to register camphor laurel. It seems that there is an unseen hand there working sometimes. There are plenty of alternatives to list camphor laurel. The smart way to deal with any so-called weed from a human perspective – and I will come back to the term "weed" later on if I get a chance – is to find a use for it.

Whether a plant is a weed or not depends on its circumstances, not upon its species. A sunflower can be a dreadful weed in a wheat crop because it mucks up the front of the header. I am coming from a very human-based perspective here – and that, of course, is what people do. Camphor laurel may be a weed, but maybe it is just a tree. What is it really doing? It is displacing a few percent of our area. What about kikuyu? That is covering an awfully large area. You could say kikuyu is a useful grazing plant for cattle, but cattle are virtually uneconomic in this area.

Camphor laurel is a very valuable tree for turning, for furniture, and smart people are exporting it. It is being exported from this area to China for coffins. We import camphor oil. We are pretty clever in this country sometimes! That is an unresolved issue. It is a question of whether or not the Far North Coast County Council gets itself a new bogeyman. The bogeyman they have at the moment is groundsel bush, which again is held up being the threat to life and limb and agriculture on the North Coast.

Groundsel bush, in my books, is not a great problem. Basically, it is a plant that indicates that the land needs repair. It grows on steep, rocky ground generally, in areas that

are not really suitable for pasture. Groundsel can be controlled by slashing. If you can't slash, perhaps that area should be returned to some other form of utilisation, for instance, reforestation.

There are a lot of interlocked issues here. A lot of it has to do with catchment maintenance and catchment protection and water protection. I come to water weeds. Again, in the county council, there is a tremendous fear of water weeds: how they clog waterways and do dreadful things. Water weeds – and there are a whole range of them – are merely a symptom of something deeper. If you keep spraying water weeds, they die, they rot, they eutrophicate the water, and more water weeds grow. It is a great little money earner for whoever is doing it and for whoever is supply the chemicals no doubt, but it is a futile exercise, and we are not really looking at what the environmental effects are.

The fate of a lot of the break-down products are not checked out. I will go on to the complete lack of any systematic epidemiological work within this State, and perhaps it is not within the bailiwick of this inquiry, but the Department of Health I believe has a great responsibility to do some systematic epidemiological studies of hot-spots of perceived problems with children and patterns of diseases.

There are very simple ways to do this. For instance, milk teeth in kids. Children shed their teeth at the age of about eight or ten, and that offers a very useful spectrum of exposure during their early years of life by analysis of those teeth. This program could be done through the schools. If kids could be encouraged to donate their teeth, via the tooth fairy or whatever, we could very inexpensively get a pattern of what is happening in this State. That is not happening at the moment. We have a lot of claims being made, and counter-claims, but we get very little empirical evidence.

I would like to make a couple of more points before I finish my opening remarks. The backyard use of chemicals is, I think, an area of incredible abuse. I would like to know, for every litre of chemical that is sold in containers in hardware stores and used in backyards, how much is effectively used. I would venture to suggest it is just a few percent of what gets sold. Most of it ends up in garbage bins or in inappropriate application containers, or on people, or accidentally getting spilt, or missing the target.

There have been some initiatives within our council to reduce the quantity of chemicals used in roadside spraying, for instance. To my mind, there is no need for the use of sprays on the shoulders of roads. In fact, I believe it is quite counter-productive in the long run. It creates a chemical treadmill. It creates generally a scorched earth policy along the shoulders of roads, which leads to increased road maintenance costs. The alternative of slashing, et cetera, promotes prostrate growing species, particularly very tough grasses that are ideal for holding shoulders together. It has got a lot to do with design of the roads when they are first put in. So we are still working on that.

There are differences of opinion within our council about this issue. I am probably one of the most strident members of the council in this regard. However, there is a consensus that there is a problem and that it is not going to go away. In the long run, changing land use and land ownership will resolve the issue because the trend in this area is for a very high level of awareness of human health and quality of life issues, and not necessarily accepting the conventional wisdom of the Department of Agriculture and its sponsors.

**CHAIRMAN:** You have raised a few issues there. You spoke about the council's slashing along roads versus poisoning the edges, but you did not say what Byron Shire Council decided to do.

**Cr STAPLES:** Council resolved to cease all spraying of roadsides about two or three months ago. There subsequently was a motion to water that down a little bit, to reduce spray use to 25 per cent, I believe, of current usage. I see that as a typical politician's compromise. It is basically going to cost more to monitor the new system than it would be to cut out that type of spraying completely. Lots of people do not spray, and lots of agencies do not spray. For instance, in New Zealand there are a lot of local government authorities that are instituting no-spray programs, and I believe there are similar bodies in Australia too. I think it is quite easy to go down that path. It is a very simple win for the environment to do that, and it also will create more employment. Nearly all of these initiatives create jobs.

**CHAIRMAN:** The reason I asked is that I was formerly a general manager of a council in western New South Wales, and only one of all the surrounding councils actually sprayed. Everybody else, including the council of which I was general manager, had always slashed.

**Cr STAPLES:** Yes.

**CHAIRMAN:** Are you proposing to put camphor laurel on a category 1, 2 or 3 in the noxious weeds list?

**Cr STAPLES:** Yes.

**CHAIRMAN:** Is it not in any category in that list?

**Cr STAPLES:** The proposal was W3.

**CHAIRMAN:** Which is the lowest of the three?

**Cr STAPLES:** W4 is environmental weeds, which is virtually just putting a cross against them. It was W3, but the prescription for the south of the county area, down towards Grafton, was to continuously suppress and destroy all trees under three metres and gradually destroy trees over three metres. I believe that is based on a misinterpretation of the camphor laurel seed ecology. I should mention that I have got a degree in agriculture and I have studied genetics and a few other things.

I believe that the limiting factor for camphor spread is not seed supply but germination sites. I say that because, in the last 40 to 50 years, many large, mature camphors have grown and may have produced tens of thousands of seeds a year. As a general philosophy for a non-chemical weed control approach, I say, "Don't bother about the seeds. There are going to be seed banks out there for all kinds of weeds for a long time. Deal with the maintenance of the land. I have got lots of camphors coming up on my place but they are no problem, provided you find their Achilles heel, like with any so-called weed, treat them in a timely way and get them at their most vulnerable point.

A lot of the big camphors are actually performing a very useful function in terms of amenity screening, and in the long run, provided they are managed – and that may

require a certain amount of silviculture – and they can become a very valuable product. A large camphor log can be worth well over a thousand dollars.

**CHAIRMAN:** Are there any other weeds county councils in the area that have declared them noxious weeds?

**Cr STAPLES:** No. Camphor is more or less restricted to the Northern Rivers and down as far as about Coffs Harbour.

**CHAIRMAN:** I would be interested to know what your weeds county council is doing to restrict weeds other than by the use of chemicals.

**Cr STAPLES:** Nothing.

**CHAIRMAN:** Interestingly, you mentioned the residential use of chemicals. What is Byron Shire Council doing to see that local government is minimising the risk of impact on persons and properties from the use of pesticides, but particularly in relation to residential use? For example, there are some proposals that if somebody wants to spray their house for spiders, white ants or whatever, notices should be put out because neighbours could be susceptible to chemicals.

**Cr STAPLES:** We have not taken any specific initiatives in that area yet. I would certainly – perhaps in the next term, if I am back there after September – I will be looking at particularly termiticides, and the use of even chlorpyrifos – and the various health effects of that are fairly disturbing at times. Given that there are so many good alternatives available these days for termite control, I would suggest that that needs to be in DCPs and so forth.

**CHAIRMAN:** That leads me to my next question. What do you think the role of State government agencies like the Department of Urban Affairs and Planning should be in minimising the risks from pesticides? I am not sure whether you know the situation in Dubbo, which I think is the only council in the State that has made it a condition that somebody who wants to set up a cotton farm has got to put in a development application. Obviously, that is causing a big fuss there.

**Cr STAPLES:** So it is regarded as intensive industry.

**CHAIRMAN:** And because of the pesticides use associated with it. There are no cotton farms in Dubbo yet, but the council now has an application before it from a farmer who wishes to grow cotton. Obviously, has your council considered that with your DCP or your local environmental plan?

**Cr STAPLES:** Not specifically. But that is certainly possible. But, in general terms, I would like to say that, as with the water reform package, where there has been a strong emphasis on throwing the decision back to regional areas and letting the regional areas set their own standards, I think a similar thing should happen in this area with pesticide use. There are a lot of benefits in giving more control to local government to set their own standards, given a minimum bar set by the State government if you like. But then, if local areas, through their constituents, want to have a higher standard they should be allowed to do that.

**CHAIRMAN:** Are there any proposed legislative amendments outlined in the Environment Protection Authority discussion paper to change the Pesticides Act that would cause problems to the council or that would be unacceptable to the council?

**Cr STAPLES:** I must admit that I am not that familiar with the matter to be able to comment in a comprehensive way.

**CHAIRMAN:** But there is no problem that you are aware of?

**Cr STAPLES:** Not particularly, no.

**The Hon. J. R. JOHNSON:** Cr Staples, you made comment of some restrictions being placed on or encouragement given to landowners not to plant bananas. What evidence do you have for that?

**Cr STAPLES:** The Department of Agriculture periodically has published brochures on bunchy-top and ----

**The Hon. J. R. JOHNSON:** I will ask about bunchy-top in a minute.

**Cr STAPLES:** Could you repeat the question?

**The Hon. J. R. JOHNSON:** What evidence do you have that somebody, the department or its officers, are placing restrictions on or encourage landowners or leaseholders not to plant bananas?

**Cr STAPLES:** All I know in relation to this area is related to the question of bunchy-top. That is the main concern.

**The Hon. J. R. JOHNSON:** But you said that they were encouraging farmers not to plant bananas. What evidence do you have for that?

**Cr STAPLES:** I have been told, and there has been lots of media on ----

**The Hon. J. R. JOHNSON:** I have been told a story about Santa Claus too, and Cinderella, but what evidence do you have?

**Cr STAPLES:** None.

**The Hon. J. R. JOHNSON:** How prevalent is bunchy-top in the Middle Pocket area?

**Cr STAPLES:** There is very little of bunchy-top because there are not many bananas grown there any more. There was a terrific banana industry there 20, 30 or 40 years ago in the Main Arm Pocket, because the metamorphic soils in that area were seen to be suitable for the growing of bananas. But they are nearly all gone now. The area is turning back into rainforest. It is a generational shift, and there are only two or three significant growers still left there. It is seen as not being a suitable area for growing bananas, I guess, because people have moved out and moved on.



**The Hon. J. R. JOHNSON:** Wasn't the bunchy-top controlled? Did bunchy-top drive them out?

**Cr STAPLES:** I don't know whether that was the main reason. I am sure there were a lot of other factors involved. But it is an ongoing problem.

**The Hon. J. R. JOHNSON:** Bunchy-top is an ongoing problem now?

**Cr STAPLES:** Yes. I have got brochures from the Department of Agriculture saying that. They are saying that it should be reported, et cetera. Periodically, over the last few years, they have been putting out brochures. I could, perhaps, dig out one of those brochures.

**The Hon. J. R. JOHNSON:** Further up the Tweed Valley, towards the Numinbah Valley, is that still under bananas?

**Cr STAPLES:** I am not so familiar with the Tweed as I am with Byron shire, but I understand that there are still some bananas still there. Perhaps Kathy Vail can help you with that.

**The Hon. I. COHEN:** Cr Staples, could you enlarge on the issue that you have mentioned regarding the Environment Protection Authority's waterways reforms and whether those reforms are having any impact on the pollution of waterways in your area?

**Cr STAPLES:** How do you measure that? It is going to take time.

**The Hon. I. COHEN:** Has it been successful? Do you think it is going in the right direction?

**Cr STAPLES:** I am very optimistic, yes, that that process can be a useful one. The Water Management Committee, which is operating in this area, seems to be performing pretty well. I am an alternative delegate on that and, although I have not been to all the meetings, it seems to be a very inclusive process and a comparatively bottom-up process compared to most of them.

The challenge is going to be to put in place some form of monitoring regime which will give us some sort of data, such that we can say, "In 1990, this was happening; in the year 2005 we have moved from A to B." Of course, the experts would be able to help us get those sorts of regimes in place, but a lot of it again will fall back on local government, through its State of the Environment reporting process, to look at the most appropriate parameters. The rivers are basically the kidneys of the land, the canaries in the coalmines if you like, and we have to focus on what drains off the land as being a symptom of what is happening on the land. Riparian repair is very important in this regard. There is an awful lot that we can do at a local level.

**The Hon. I. COHEN:** You mentioned the proximity of spraying activities to other activities that clash. Has council formulated minimum buffer zones from residences, school bus routes, waterways and areas of environmental sensitivity? Does council have any position on that, or any specifics that can be used as a guide? Do you have any program that ultimately may be brought into effect on that?

**Cr STAPLES:** Not really, no. It is very hard to get evidence that can be used to back up draft instruments of that type. For instance, the only study that I have seen on pollution of water supplies from spray drift was in the Namoi Valley, and it was inconclusive, even over quite a distance. I guess we are going to have to pluck a figure in a way, based upon size of blocks. It is the art of the possible, to a certain extent. The overriding principle, to my mind, should be that if you are going to pollute your property you should provide the buffer and not expect your neighbour to provide it.

**CHAIRMAN:** Buffers are to some degree inappropriate, because, for example, if you pick 100 metres as a buffer, it could be an excuse for somebody to say, "Well, I didn't spray within a kilometre of a river." It might have more to do with the day on which they sprayed and the chemical that they used, rather than the buffer distance. In that case, it might be 20 metres from the river. We heard evidence in Gunnedah that endosulfan had travelled 11 kilometres. So how big have you got to make the buffer? Does it have to be 100 kilometres? It seems to be a matter of the appropriateness of the use of a particular chemical on a particular day, rather than the width of the buffer.

**The Hon. I. COHEN:** Does the council have officers to deal with this situation? Is it something that can be effectively monitored in terms of complaints made? Are you familiar with the Pesticides Act, and can you see any changes in the Act that would allow the council to be more effective in dealing with disputes over chemical trespass, for example?

**Cr STAPLES:** I am not a legal technician, and I would not be able to point to specific clauses and so forth. But, in general terms, our council has taken a lot of steps in the last four years to gear itself up to deal with these issues a lot more. We opened our own laboratory last year, and that is getting NATA registration at the moment. We have in the last year or so employed an environmental officer specifically to deal with these kinds of issues. We have had an environmental officer all the time, but we have an additional officer now. So I think we are getting to the stage where we are well equipped with the technical expertise that we need; or, if we have not got it, we can go and get it.

**The Hon. I. COHEN:** Has council discussed any marketing potentials that would come about with a pesticide-free zone, for example, in the Byron shire? Is there any win-win for the farming community of export products and tourist potential?

**Cr STAPLES:** It is just enormous.

**The Hon. I. COHEN:** Could you give a couple of examples.

**Cr STAPLES:** We are dealing with enormous public good versus a few individuals in this area. At a national level we talk about clean-green industries. There is an awful lot of rhetoric, but I doubt whether it is matched in reality. It may be, compared with other parts of the third world, but I do not believe this part of the third world is clean and green on a national level.

Nevertheless, at the local level, we have the potential to get there quite quickly and market this area – as we are in other aspects, such as tourism, alternative forms of settlement. In the same way, this can be a leader for sustainable agriculture, which produces a lot more rural living opportunities for people to live on the land and work the land.

The old way of farming in this area is inimical to life. People don't want to live near their crops because it is too dangerous to live near their crops. If we can let this process evolve, that would be an advantage. It is not that the new settlers need re-educating. We have a very aware community here. It is the governments that need educating. If we let this process keep going on, we can have a lot more people living in rural areas.

I say quite happily that I have got no problems with people moving into rural areas provided they take care of the environment and enhance it, thereby enhancing the local economy at the same time. All those things can happen. We have an impediment in the way of that at the moment in the form of chemicals and pollution, perceived or real health problems, and the effect that those matters have on our image. In terms of marketing particularly, it is very bad.

**The Hon. I. COHEN:** In terms of chemical trespass, do you have sufficient staffing to be able to monitor that? How effective is council in pulling up people who are actually responsible for chemical trespass? Would something like a dye in the chemical, for example, be of assistance to council officers in assessing just where that chemical has spread? And do you have any other simple ideas that may be of assistance to council in policing matters to do with chemical trespass?

**Cr STAPLES:** Yes. I know one of your Committee members, Dr Brian Pezzutti, raised this many years ago, and I supported it at the time. I think it is a good idea. It is perhaps optimistic in supporting it. That is one of many measures that may help. To answer your question: council, like the Environment Protection Authority, has a lot of difficulty in pinning down the cause of an event. For instance, about two kilometres of Mullumbimby Creek, which just happens to include Mullumbimby's water supply, got practically sterilised about two years ago by chlorpyrifos. That was a massive chemical event, but there was no prosecution. It is a question of getting strong enough evidence, and so forth. But I really do not see the courts as being the primary focus for generating reform here.

**CHAIRMAN:** Thank you very much for coming along and giving evidence to the Committee. We have some questions that we had intended to ask you to take on notice. In a couple of weeks we will send you a copy of the transcript to check before it is released to anyone else. When you receive that, it will include this list of questions. I will give you a copy of those now, so that council may add something, if you consider that, having read the transcript, you believe you have missed something. Technically, would you take these questions on notice. They are:

1. *Can Byron Shire Council outline the types of activities that council or its contractors conduct that involve the use of pesticides, including fungicides and herbicides?*
2. *How important is town planning to minimise incidences of local conflict between incompatible land uses?*
3. *In the council's opinion, what is the minimum buffer zone that residences, school bus routes, waterways or area of environmental significant should be away from pesticide applications to avoid the impacts of pesticide drift?*

(The witness withdrew)

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**KATHERINE MARGARET VAIL**, Spokesperson, Poison Watch, of Middle Pocket, Billinudgel, affirmed and examined:

**CHAIRMAN:** What is your occupation?

**Mrs VAIL:** I am a trained nurse.

**CHAIRMAN:** In what capacity are you appearing before the Committee?

**Mrs VAIL:** I am appearing as spokesperson for Poison Watch.

**CHAIRMAN:** Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

**Mrs VAIL:** I did.

**CHAIRMAN:** Are you conversant with the terms of reference of this inquiry?

**Mrs VAIL:** I am.

**CHAIRMAN:** If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into confidential session. However, I must warn you that Parliament always reserves the right to override the Committee's decision and make anything you say public. Would you like to make an opening statement?

**Mrs VAIL:** I have a written submission.

**CHAIRMAN:** Would you like to table that?

**Mrs VAIL:** Would you like to also read it out, or also to read it?

**CHAIRMAN:** If you table that, it will be exactly the same. It will end up in *Hansard* word for word. So, if you then read it out, it will end up in the record twice.

**Mrs VAIL:** But the submission also has recommendations at the end.

**CHAIRMAN:** Could you briefly talk to those, rather than read the whole lot word for word. Would you like to formally table that?

**Mrs VAIL:** Yes, I will table it.

**Document tabled.**

**CHAIRMAN:** Would you go ahead.

**Mrs VAIL:** I want to bring up a couple of things and quickly go through what Poison Watch is particularly after. Poison Watch as a group is particularly after 24 hours pre-notification of aerial spraying on the North Coast. We are also asking for no fly times during

school bus hours. We ask for buffer zones of 3.6 kilometres along all public roads, around all schools and public playing fields, according to the documented evidence of the Environment Protection Authority with the presence of pesticides in rainwater tanks in the Gunnedah district that are 3.6 kilometres off target.

We also want buffer zones of 3.6 kilometres around all aerially sprayed agricultural crops; buffer zones of 3.6 kilometres around all water courses; local government to include in the LEP the requirement for a development application for all agricultural activities that involve pesticide use; the revocation of pesticide licences for irresponsible use; monitoring of all water courses; and the investigation of alternatives to chemical use. If I could return to the monitoring of all water courses. We thought that maybe the Department of Land and Water Conservation and perhaps the water catchment committees under the guidance of the local councils could be involved in water monitoring.

As to alternatives to chemical use: I have a friend down the road in Middle Pocket who happens to be a banana farmer. His name is Barry Lang. He has given me permission to submit today this letter to the inquiry. It is a letter that he has written on the ineffectiveness of aerially applied chemicals on his banana crop.

**CHAIRMAN:** Would you like to table that on his behalf?

**Mrs VAIL:** Yes.

**Document tabled.**

**Mrs VAIL:** The other thing that is most important on this issue, particularly in the Middle Pocket area, is that since 1995, when the Carr Government came to office previously, we were promised many things, but since then there have been 17 unannounced aerial spraying incidents outside school bus hours in the Middle Pocket/ Billinudgel/Yelgun area. Despite mediation, we still do not know when this pilot is coming in.

There have been 28 unannounced aerial spraying incidents during school bus hours that have been reported to the Environment Protection Authority and have been documented by the Environment Protection Authority. Despite 28 reported incidents, there have been no prosecutions at all. It is a case of business as usual. The children are still waiting on public roads for their school buses in the morning, and the pilot is still coming in despite pledges that he made to Ian Armstrong in 1991 that he would not spray while children were likely to be waiting at bus stops. He renewed that pledge with Ian Causley. Pam Allan, as Minister for the Environment, sent him a letter reminding him of his duty of care. The letter was sent to all aerial operators that they had a duty of care.

Despite all of this, the pilot is still coming in and spraying during school bus hours. So, until we get the amendments in during the next parliamentary session, this will continue to happen. Poison Watch, as a group, will not sit back for another season and watch our children sprayed as they go to school.

**The Hon. I. COHEN:** Mrs Vail, Cr Staples mentioned the difficulties with mediation with the Environment Protection Authority. Could you enlarge on that? I understand that you were involved with that mediation.

**Mrs VAIL:** I was involved with mediation. If we start from the very beginning: The mediation letter that was handed to me before mediation was an agreement to be signed. I rang my solicitor right there and then, and he advised me not to sign the mediation agreement because it already had a predetermined outcome: that is, the outcome was that aerial spraying would continue, when we had not yet even sat down at the table to discuss anything.

The mediation was confined to Middle Pocket alone. There were many other people there from many valleys, but they were not allowed to attend the mediation process. The agenda for the process was from 9 o'clock to 5 o'clock for two days. I had to leave at 6 o'clock on the first day – because I have a very bad back, and I could not sit for any longer. Many of the community did not have any after-care for their children because the agenda noted that the proceedings were to finish at 5 o'clock on the first day, and they did not. Many people had to leave.

But the mediation agreement was signed, under duress, at 11 o'clock at night, with most of the community absent. We came back the next morning for our second day of mediation, according to the agenda, only to find that we were presented with a mediation agreement that had been drawn up and signed in our absence. We were there for the second day of proceedings, and nobody turned up, except for us and the committees there.

**The Hon. I. COHEN:** Having been to Middle Pocket and seen the size of the banana plots there, do you regard that there is effectiveness in the farmers continuing to undertake aerial spraying on those plots?

**Mrs VAIL:** I cannot see any effectiveness at all. The gentleman who has a patch of bananas has been in question for many years, like many other banana plantations, happens to be next to the bus stop. The children are often caught unawares by the aeroplane. I have an opinion as to the only reason that he does it. He only has a hectare, a very small patch of bananas – is that he has been asked by the Banana Growers Federation to hand spray, and he has been asked by the BIC, to use a backpack on it, and he won't do that.

I see no other reason than that he is using it as a tax dodge, for tax purposes, like many other banana farmers in Middle Pocket. They don't rely on their banana farms as a total source of income, because they are not getting very much income from bananas. So it is all a back-up really.

**The Hon. I. COHEN:** Can you see improvements that chemical manufacturers could undertake, or that distributors and applicators could undertake, to improve the management of pesticides?

**Mrs VAIL:** I think the farmers very much need to be educated on what they are using, and how to adhere to the label instructions. Many labels are not adhered to. In fact, the banana farmer that I just spoke about also sprays his banana crop in May. Novartis, which manufactures Tilt, a fungicide that is used on the bananas, recommends against any spraying after April. I don't know whether he is breaching regulations, or whether that is on the label of the can. If it is on the label of the can, he is breaching his legal requirements. Nonetheless, he sprays after the time recommended.

**The Hon. I. COHEN:** You mentioned a number of changes to the Pesticides Act that you would like to see occur. I understand that one section of the Act that makes it

difficult for the public to lodge objections and claims in respect of applicators involves an offence that the applicator wilfully or knowingly committed a breach.

**Mrs VAIL:** Wilful intent.

**CHAIRMAN:** It is clause 37.

**Mrs VAIL:** They are terrible words. They don't mean anything.

**The Hon. I. COHEN:** Do you think that provision could be tightened up?

**Mrs VAIL:** Absolutely.

**The Hon. I. COHEN:** What would you like to see?

**Mrs VAIL:** I don't think wilful intent is the correct wording to be using there at all. How do you prove wilful anything? I don't even know whether you would use the word "intent". Perhaps you can. I know the particular pilot in question has been asked so many times to please let people know when he is coming in, so that we can take the necessary precautions, that is, making sure our children are not in the firing line and that we are not in the firing line.

Of course, the biggest issue there is spraying on public roads. Public roads are not covered by the pesticide legislation. They are exempt. They have to be brought under the Act by amendments so that they can be protected under the legislation.

**The Hon. I. COHEN:** We mentioned before about dyes in chemicals. Do you have any other defensive tactics that might be effective in terms of policing these operations? A dye seems like a simple idea.

**Mrs VAIL:** For policing, I think vegetable dyes are probably the cheapest way of finding out where the spray is going. I know Dr Brian Pezzutti contacted me in 1991, pushing for dyes in sprays. I commend him on his efforts. If it is alright, I would like to table this document also. It is a newspaper cutting.

#### **Document tabled.**

**The Hon. I. COHEN:** You say that the farmers in the area have been contacted by the various authorities regarding use of backpack ground sprays. Has any significant reason been given, especially as the areas under cultivation are so small, as to why ground spraying cannot be used? Do you feel that ground spraying could solve the problem?

**Mrs VAIL:** I think ground spraying could most definitely solve the problem. In fact, I would go as far as to say that there should be a cut-off point; that is, there should be a minimum allotment size, of whatever crop it is, before it is acceptable to aerial spray. I don't think spraying of one hectare when there are 38,000 people in Byron shire today. That is one plot, but it is one of many plots. You cannot do that any more; it is affecting too many people.

**The Hon. I. COHEN:** Has the farmer given any reason why ground spraying would not be effective?



**Mrs VAIL:** No. He is a 70-year-old man and he is very set in his ways and he is not about to alter.

**CHAIRMAN:** Is the plot on the side of a hill?

**Mrs VAIL:** It is actually next to the road, on very undulating land. Topographically, it is not steep at all. It is very accessible and very close to the road.

**The Hon. I. COHEN:** I would have to say, having looked at the site, that it is a bit of an aerial circus to get the aeroplane over there safely, because the power lines make it some feat of flying. It makes one wonder.

**Mrs VAIL:** Yes.

**The Hon. J. R. JOHNSON:** Could you tell us where the pilot's base is?

**Mrs VAIL:** As far as I know, it is in Murwillumbah. It is Tapps Aviation in Murwillumbah. I would also like to add here that I have nothing personal against the pilot. The pilot is not my problem. The lack of legislation is my problem. The pilot is not going to come into line until the legislation is amended.

**The Hon. J. R. JOHNSON:** Is your organisation Poison Watch an incorporated body?

**Mrs VAIL:** No. It is actually a group of community people.

**The Hon. J. R. JOHNSON:** How many members do you have?

**Mrs VAIL:** There are about five members. It was formed in 1991.

**The Hon. J. R. JOHNSON:** Are there many other banana farmers in Middle Pocket?

**Mrs VAIL:** Apart from the gentleman that I just spoke of, there are two other banana farms in Middle Pocket. One would probably have about 95 per cent of the bananas in Middle Pocket. The other plantation is on the south side of the hill. This is the plantation that belongs to Barry Lang, who has done testing of Tilt on his own property. He is also making his property available to the Environment Protection Authority or whoever would like to conduct any alternative trial testing on his property. He is making it freely available for alternatives to be tested.

**The Hon. J. R. JOHNSON:** Are there bananas at Yelgun, Billinudgel, Byron Bay and Stokers Siding?

**Mrs VAIL:** Yes.

**The Hon. J. R. JOHNSON:** Is there aerial spraying of those bananas?

**Mrs VAIL:** Yes.

**The Hon. J. R. JOHNSON:** Do you have complaints from that area to your body?

**Mrs VAIL:** Yes.

**The Hon. J. R. JOHNSON:** From all of those areas?

**Mrs VAIL:** Not the Stokers Siding area. I am not very familiar with Stokers Siding. I mean, I know Stokers Siding, but I am not very familiar with the topography there and where the bananas are there. I do know that the other place that they have a lot of trouble with is up on the Gold Coast, at Bilambil. A lot of them complain.

**The Hon. J. R. JOHNSON:** Bilambil is in New South Wales.

**Mrs VAIL:** Yes.

**The Hon. J. R. JOHNSON:** I get concerned at Committee hearings when people make statements, on oath or affirmation, that go into the public record without any evidence to support those statements. You made a statement about a gentleman whose banana property is being sprayed by aerial spraying. You said that it is probably a tax dodge. Do you have any evidence of that?

**Mrs VAIL:** No, I don't.

**The Hon. J. R. JOHNSON:** I do not think a lot of causes are done any good when these statements are made.

**Mrs VAIL:** I could say that is my own personal opinion. I don't have evidence.

**The Hon. J. R. JOHNSON:** Thank you.

**CHAIRMAN:** I thank you very much for your time. You may have answered all the questions that we had intended to ask you to take on notice. I will give you a copy of those. You might, in particular, answer the question numbered two. That question is:

1. *Can you expand upon the comments made in your submission as to the advantages of introducing a National Registrar of Analytical Method?*

(The witness withdrew)

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**STANLEY ARTHUR SCANLON**, Spokesperson, Byron Environment and Conservation Organisation, Conservation of North Ocean Shores, and Byron Environment Centre, P. O. Box 828, Billinudgel, affirmed and examined:

**CHAIRMAN:** Mr Scanlon, what is your occupation?

**Mr SCANLON:** Social welfare worker.

**CHAIRMAN:** In what capacity are you appearing before the Committee?

**Mr SCANLON:** On behalf of the Byron Environment and Conservation Organisation, the Conservation of North Ocean Shores, and the Byron Environment Centre.

**CHAIRMAN:** Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

**Mr SCANLON:** I did.

**CHAIRMAN:** Are you conversant with the terms of reference of this inquiry?

**CHAIRMAN:** If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into confidential session. However, I warn you that Parliament has the right to overturn the Committee's decision and make your evidence public. I should also add that has not happened, but I feel it is my duty to warn you of that. You have given the Committee some confidential papers that are attached to your submission. I am not sure how the Committee is to handle those confidential papers. I think the Hon. John Johnson might want to ask you some questions in private.

**The Hon. J. R. JOHNSON:** I am concerned that we have before us a document that is marked "Private and Confidential". Whilst, as the Chairman has said, the Parliament has never superimposed its overriding power on the Committee, it does have the authority to publish everything. My concern is: Do you wish to leave this document in the Committee's hands, or do you wish to withdraw it?

**Mr SCANLON:** May I peruse that document to see its contents?

**The Hon. J. R. JOHNSON:** It is your document. You sent it to us, with the appendages.

**CHAIRMAN:** Mr Scanlon, the Committee is in your hands. Would you like us to go into camera?

**Mr SCANLON:** No, I don't wish the Committee to resolve into private.

**CHAIRMAN:** Private is different from in camera. We have had a couple of occasions where the evidence in these hearings has been taken in private but that evidence is still public. In other words, we cleared the room so that the witness could give evidence to the Committee without fear of being heckled by some members of the public. However, all

of that evidence given in that way is public evidence. That is different to in camera evidence. When the evidence is given in camera, it is not published in *Hansard*; it is kept confidential, unless Parliament overturns the Committee's decision and decides to publish that evidence. I wonder whether you want us to go in camera.

**Mr SCANLON:** No.

**CHAIRMAN:** Do you want to consider your position on that document a bit further?

**Mr SCANLON:** May I?

**CHAIRMAN:** It is up to you.

**The Hon. J. R. JOHNSON:** I would like to ask questions on it. I cannot understand, with due respect, why a document submitted to a Standing Committee of the Parliament is marked "Private and Confidential", when it goes for pages and pages.

**Mr SCANLON:** Basically, at the time my main concern was possible intimidation of my family and myself.

**The Hon. J. R. JOHNSON:** That is understandable. What do you want us to do with it? Do you want to withdraw it?

**Mr SCANLON:** As the Chairman just mentioned, if this can be viewed by the Committee and not published, would that be satisfactory?

**CHAIRMAN:** So you want that submission to be kept in camera?

**Mr SCANLON:** Yes.

**The Hon. I. COHEN:** Could I suggest that, if questions are asked on that, at that point we should go into camera. If Mr Scanlon chooses to answer, he can answer the questions in camera.

**The Hon. J. R. JOHNSON:** It does not concern me; it concerns Mr Scanlon.

**CHAIRMAN:** At any stage when you are giving evidence, if you feel that the answer that you are about to give should be given in camera, just ask us, and we will go into camera for 30 seconds, five ", or whatever period you want, to hear what you have to say, and then resume in public. It is entirely up to you as we go through.

*Motion by the Hon. I. Cohen agreed to:*

*That the submitted document marked "Private and Confidential" and appended newspaper clippings be taken as evidence in camera.*

**CHAIRMAN:** Mr Scanlon, would you like to make a statement before members of the Committee ask you questions?

**Mr SCANLON:** Yes. I have no experience or qualifications, nor do I have a scientific background, regarding pesticides of any description. Nevertheless, I have been a resident of the Byron Shire for 21 years and I have been involved with the pesticides issue for 20 years after experiencing its misuse near my home and property. I was first exposed to pesticides in 1979, shortly after moving to the North Coast of New South Wales. The pesticides 2,4,5-T and 2,4-D were widely used on a large land holding adjacent to my home.

Following wide media coverage regarding the concerns I had for the health of my family, community and environment, I received countless telephone calls from concerned individuals who had been placed in similar situations regarding pesticide exposure on the mid and far north coast of New South Wales. Some of these telephone calls were from elderly widows of ex-government and industry employees, for example, dip site operators, banana inspectors and farmers. These individuals have related their husbands' work-related activities within the pesticide arena, their daily exposure to such, and what they believed to be the consequent health effects experienced by their spouses. Many had died from cancer-related symptoms. Some of these ladies' health had also been affected. Many other individuals have also related their experiences, especially the health effects they suffered, some similar to my own regarding exposure to pesticides.

Complaints have been raised regarding the irresponsible use of pesticide spraying by farmers, government agencies, developers and neighbours. It may only be a small percentage of operators that continue to misuse pesticides, however, it is the government's duty to introduce strict legislation to protect the health and safety of the community, in particular innocent school children.

Under the current legislation of the 1978 Pesticide Act it appears that misusers can elude and continue to misuse pesticides as there is no law in place to protect the people. When it comes to aerial spraying, the Environment Protection Authority, which is the regulatory agency, appears to have a conflict of interest, which must be removed if the government intends to take this issue seriously.

The Environment Protection Authority issues and renews the licences of aerial pesticides applicators. It also appears that the Environment Protection Authority has been reticent to take appropriate action in court where members of the public have been affected by pesticides misuse. Could this be because the Environment Protection Authority issues the licences to these aerial applicators? The Environment Protection Authority's response to these incidents is to write to the applicators concerned reminding them of their duty of care. This, of course, has been non-effective and offers no security to people and parents of children whose safety is repeatedly placed at risk.

There have been numerous incidents and complaints raised with the Environment Protection Authority regarding one particular aerial applicator on the far north coast of New South Wales. The EPA has evaded genuine complaints and concerns by merely writing to the applicator reminding him of his duty of care. It would appear that the EPA does not take into account these complaints, as licences continue to be renewed and aerial spraying operations still continue during school bus times. This practice is totally unacceptable and is one that must be amended via appropriate legislation.

In September 1997 I attended a mediation process initiated by the Environment Protection Authority and interested parties regarding aerial applied pesticides in and around the Middle Pocket area, located in the northern part of the Byron Shire. Many participants believed

that the community was ignored by this process, which in the end achieved nothing, yet cost tens of thousand of taxpayers' money. This mediation process left community participants with a sense of disempowerment and a feeling of professional manipulation. It was no alternative to effective legislative regulation. Please note: this mediation process focused around one small rural valley only.

Numerous individuals I have spoken with have expressed how they have experienced intimidation, rudeness and lack of co-operation when they have raised concerns with contractors, government agencies and industry representatives. There is presently no legislation in place requiring the applicators to notify nearby residents or warn schools, et cetera. A 24-hour notification requirement is essential and must be written into the Act. At the very least, it would give residents time to cover rainwater tanks, close windows, drive children to school, keep young children indoors, or vacate their homes if they so choose.

The aerial spraying of banana plantations has been a contentious issue on the far north coast of New South Wales for many years now. Many children live in rural areas where bus stops are located near these plantations. Whilst aerial spraying operations continue unabated during school bus times, the children remain "sitting ducks" to potentially dangerous chemicals. In 1998 there was an incident where an aerial spraying operation, using the pesticide Tilt, was being undertaken at the same time a school bus was picking up school children from one of the scheduled stops.

A school student who was sitting directly under the ventilation hatch, which draws in cool air from outside, became violently ill later that morning. After a lengthy investigation, the Environment Protection Authority decided not to prosecute. Despite reliable information and witnesses, no satisfactory reason for not pursuing the case was given. There is no provision under the present Act to protect school children waiting at school bus stops, or whilst travelling on school buses, from pesticide exposure. Approximately 1,700 children are transported by one bus company alone to numerous schools from the northern part of the Byron Shire. Many of these children live in rural communities.

It is more than apparent that the current Act is outdated and totally inadequate. As the demand for residential land has increased dramatically in the Byron Shire over recent years, development and that of other further agriculture pursuits have spread into existing rural and adjacent to environmentally sensitive areas. The spraying of chemicals, in particular aerial application, can no longer co-exist with the increase of "new settlers" moving into these areas without stringent legislation set in place.

By law, it is compulsory for all children to attend school, yet there is no law in place to protect these defenceless children from pesticide exposure etc. It is the expectation of every responsible parent that the New South Wales Government has a duty of care to protect innocent children from such practices. The current 150-metre aerial buffer zone outlined in the current Act is not realistic. Concern has also been raised by the community as to the effect pesticides have on the environment, contamination of soils and waterways, the effect on flora and fauna, et cetera.

According to the Department of Urban Affairs and Planning, the population of the Byron Shire alone will double from the present population of approximately 26,000 to 52,000 by the year 2019. The shire is one of the fastest growing areas in New South Wales. The Tweed Shire is also experiencing similar growth patterns. Problems arising from pesticide drift are becoming more intolerable and unacceptable to rural populations. People have a right to live in a

healthy environment, breathe unpolluted air, drink uncontaminated water and eat uncontaminated food. I wish to table the submission to the Committee.

**Document tabled.**

**Mr SCANLON:** I also have a number of photographs, taken over a period of years, of examples of aerial spraying and ground spraying operations that the Committee may find of interest. But I am not tabling those photographs. They are there to view at your leisure.

**The Hon. I. COHEN:** Mr Scanlon, you mentioned that there is a problem with the Environment Protection Authority issuing licences and then potentially being held responsible? Should it be the government, the pilot or the owner?

**Mr SCANLON:** I believe that one agency should be responsible for the policing – issuing of fines, et cetera – and that that authority currently is the Environment Protection Authority. Its powers should be expanded to a much more realistic program and that it should have a much bigger stick under the legislation. Under the current Pesticides Act, it does not have that stick.

**CHAIRMAN:** I think the question asked by the Hon. Ian Cohen went a little bit further than that. Whom do you think the authority should be able to prosecute?

**The Hon. I. COHEN:** If there are to be changes to the Act, who should be targeted, from your experience, when there is an incident of chemical trespass? Should it be the Environment Protection Authority, the pilot who is actually flying the aeroplane and not picking the conditions for doing so properly, or should it be the owner who gives permission for that spraying?

**Mr SCANLON:** I think both the applicator and the owner.

**The Hon. I. COHEN:** What changes would you or your organisations like to see to effectively tighten up the Act and give greater protection to potential victims?

**Mr SCANLON:** Because of the time that I was taking in reading part of the submission that I put before you, I did not read the recommendations that are made. Do I have your permission to refer to those?

**CHAIRMAN:** Are those recommendations in the tabled document?

**Mr SCANLON:** They have already been given to Ms Marshall.

**CHAIRMAN:** They will already be incorporated in your submission. So perhaps you would like to target or highlight some points from those.

**Mr SCANLON:** Those recommendations are:

1. That the Pesticides Act be amended in the next session of Parliament to adequately protect the community and the environment from pesticide misuse.

2. That the provisions of the new Act include a minimum of 24 hours notification to neighbours, schools, et cetera, about intended spraying operations.
3. That a pesticide advisory body, equally represented by all parties, be established under the new Act to advise the Minister on pesticide risk.
4. That planning controls via development applications and environmental impact statements be adopted for areas of intensive agricultural use dependent on aerial spraying.
5. That licences be mandatory for on-ground applicators.
6. That it be an offence to injure people, property or the environment.
7. That employers also be liable for acts of their employees and contractors.
8. That aerial spraying be banned during school bus hours.
9. That the Environment Protection Authority be given more powers to issue notices and to prosecute for offences.
10. That the Environment Protection Authority respond within a reasonable time period after a complaint is raised.
11. That third party rights be put in place to enforce the new Act.
12. That stricter fines be implemented.

**The Hon. I. COHEN:** Should aerial spraying in your area be banned?

**Mr SCANLON:** In my opinion, yes.

**The Hon. I. COHEN:** Do you think that the topography and size of the farms would allow for on-ground application of chemicals in a manner that would be adequate for the grower?

**Mr SCANLON:** I believe so.

**The Hon. I. COHEN:** Has that been discussed with any of your neighbouring farmers at all? And have you had any reaction to that position?

**Mr SCANLON:** Most individuals that we have spoken to have immediately referred us to their industry representative. Unfortunately, we have not been met with a great deal of favour, and there have been many excuses as to why aerial application is so important in a particular area.

**The Hon. I. COHEN:** Could you give a couple of examples of why the industry sees aerial application as so vital?



**Mr SCANLON:** I believe the cost factor was one important point that was made. Further, that, basically, the community really had nothing to worry about because these chemicals are perfectly safe.

**The Hon. I. COHEN:** Has Byron Shire Council's policy of ending roadside spraying and such like been of benefit to your local community?

**Mr SCANLON:** Any reduction in pesticide use is a benefit to the community as a whole as well as to the environment.

**The Hon. I. COHEN:** In your local area, would you see any specific opportunities for food production if those products were able to be declared pesticide-free? If you were living in a pesticide-free zone, could you see any agricultural export opportunities there?

**Mr SCANLON:** I feel that the general consumer, not only in Australia but especially overseas, cannot get enough of organically-grown food. Basically, a pesticide-reduced industry would surely enhance the monetary value of such products.

**The Hon. I. COHEN:** Is organic food cultivation being undertaken in your area?

**Mr SCANLON:** There are only very, very small farms – if I could call them that, of maybe a house block or maybe a hectare – of organically-grown foods. Most of the industry in the area in which I live is dependent on pesticide use.

**The Hon. J. R. JOHNSON:** Mr Scanlon, you have suggested that an all-parties committee be set up. What do you mean by that?

**Mr SCANLON:** Many individuals and industries have their opinion on how pesticides could be used.

**The Hon. J. R. JOHNSON:** So you are not talking about political parties; you are talking about individual parties.

**Mr SCANLON:** No, I am not talking about political parties. I am talking about an advisory body with representatives from the banana industry, the sugar cane industry, and so on – of representatives of industry in my particular area.

**The Hon. J. R. JOHNSON:** Taking you at your word, you said "all-parties". If that were set up, you would have a committee so large that you would not find a room big enough for it to meet.

**Mr SCANLON:** I feel that the community as a whole should have some form of input to such a body. I feel it is important that there be representation on it from the State farmers body, or whatever industries are involved. There is an environment movement in Sydney called the Nature Conservation Council of New South Wales which possibly will be represented by one individual.

**The Hon. J. R. JOHNSON:** I think your representations might need a little more refining. You might like to submit that to us.

**Mr SCANLON:** Thank you for bringing that to my attention.

**The Hon. J. R. JOHNSON:** You said you would like to see all on-ground applicators licensed. How practical is that? If I have got a can of spray that I wish to apply to some noxious weeds in my garden on my ordinary suburban plot, that I would have to make an application for a licence to apply it?

**Mr SCANLON:** I am mainly referring to individuals who are involved in the agricultural industry, such as noxious weed eradication councils, private contractors, or whatever.

**CHAIRMAN:** The way you have worded it would mean every single farmer in the State.

**The Hon. J. R. JOHNSON:** And not only the farmers.

**CHAIRMAN:** You mean the users who do not use it for their own use?

**Mr SCANLON:** Yes. I would like to bring something to your attention, if I may, as an example of an incident that occurred in 1996. One Sunday afternoon in 1996, in an area known as The Pocket, which is located in the northern part of the Byron shire, parents and young children were exposed to spray drift as the landowner and his contractor sprayed the pesticide 2,4-D in close proximity to a child's third birthday party.

When approached by a concerned parent about what chemical he was using, the contractor responded by saying, "Hippy killer." The Environment Protection Authority in this case successfully prosecuted the persons responsible. It is important to note that the contractor involved in this particular incident held a pesticide handler's certificate.

**CHAIRMAN:** Are you saying that the Environment Protection Authority successfully prosecuted the persons responsible?

**Mr SCANLON:** Yes.

**CHAIRMAN:** We have been told that the Environment Protection Authority has successfully prosecuted only one person in the last 20 years. So that must be the person.

**The Hon. I. COHEN:** No. There was one in Dorrigo as well – and aerial sprayer in the Dorrigo area.

**Mr SCANLON:** May I expand on that by saying that if individuals are applying for such certificates, such as the pesticide handler's certificate, then it is important that they be licensed. Let us be optimistic and say it is a one-off case where an individual may have been negligent, but the fact is that the frustration and concern of the parents of the children at that party was quite unnecessary.

**CHAIRMAN:** Was that 2,4D amine or ester?

**Mr SCANLON:** I think in this day it is amine.

**CHAIRMAN:** Thank you very much, Mr Scanlon. I think you may have answered the questions that we intended to ask you to take on notice. I will give you a copy of those

now. When you get the transcript of today's proceedings, check to see whether you have answered those questions. If you have not, would you answer those questions and send in your responses in the next couple of weeks.

**Mr SCANLON:** Thank you for the opportunity to appear before the Committee.

**CHAIRMAN:** The questions are:

1. *What issues do you have with the use and management of pesticides that are perhaps regionally specific?*
2. *Can you identify any issues not outlined in the Environment Protection Authority's discussion paper that you believe need to be addressed?*

(The witness withdrew)

**RODRICK RICHARD HARRIS FAYLE**, President, Australian Macadamia Society, of Rosebank Farm 552, Rosebank Road, Rosebank, New South Wales, and

**ANDREW CHRISTOPHER HEAP**, Executive Officer, Australian Macadamia Society, of 1/113 Dawson Street, Lismore, sworn and examined:

**CHAIRMAN:** Mr Fayle, in what capacity are you appearing before the Committee?

**Mr FAYLE:** In the dual capacity of a farmer, principally a macadamia grower, and as the President of the Australian Macadamia Society to represent the industry's viewpoint.

**CHAIRMAN:** Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

**Mr FAYLE:** I did.

**CHAIRMAN:** Are you conversant with the terms of reference of this inquiry?

**Mr FAYLE:** Yes, I am.

**CHAIRMAN:** Mr Heap, in what capacity are you appearing before the Committee?

**Mr HEAP:** As Executive Officer of the Australian Macadamia Society.

**CHAIRMAN:** Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

**Mr HEAP:** I did.

**CHAIRMAN:** Are you conversant with the terms of reference of this inquiry?

**Mr HEAP:** I am.

**CHAIRMAN:** If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into confidential session. However, I must warn you that State Parliament can override the Committee's decision to hear your evidence in confidential session and could decide to publish your evidence, although it has not done that yet.

Perhaps you would like to make a short presentation, and table any documents that you wish to, and then we will ask you some questions.

**Mr FAYLE:** First of all, might I say that I do not intend to formally table any documents. But, if you should so desire, I would be happy to prepare any material that you might want. Might I start by giving the Committee some idea of my own personal background, so that you will understand where I am coming from and to enable you to determine what weight you can place on what I say.

I might be a macadamia grower but I have a mixed farm. It is principally in the farming of macadamias that I have been involved for about 10 years, and my third term of the Society is coming up. The Society is the peak industry body for the Australian macadamia industry. It is not just a State-wide organisation; it represents the industry right through Australia. The industry is not just a growers organisation; it encompasses the growing, the processing, marketing, research and development and promotional areas. Indeed, we have members of the Society who come from all sorts of backgrounds, for example, financial service people.

As part of my duties as the President of the Society, I have been quite heavily involved with the matters that are before you: that is, the use, regulation and control of pesticides. It is a subject in which I have taken a special interest. The industry has quite well-developed strategic plans and policies in place dealing with these matters. We have compulsory levies, which we raise from our production base. Quite a number of projects that we have in place deal with the subject of pesticides in various ways. I would be quite happy to explain some of those if you would like me to do so.

I have also had personal and quite close dealings with the National Registration Authority, particularly with its existing chemical use program, particularly in regard to the use of endosulfan and other products that are on the National Registration Authority's current list of things to review. So I do have a quite thorough understanding of the rules of the legislative framework within which pesticides are used in agriculture, and particularly the way in which they are used in my industry. I, of course, can only speak as an individual, although I do bring with me, I suppose, the collective wisdom of my board and of my members.

**CHAIRMAN:** Andrew, did you want to make any opening comments, or should we go straight into questions?

**Mr HEAP:** I do not have an opening statement.

**The Hon. J. R. JOHNSON:** Is there wide application of aerial spraying in your industry?

**Mr FAYLE:** No. Could I answer the question in this way. Our industry does not have an ideological outlook on any of this stuff. We have a pragmatic approach. Within the present legislation, it is quite possible for an individual to opt for that method of application if it fits within the rules. So, as an industry, we would not either bless, condemn or make any other comment on whether somebody wanted to use aerial spraying, as opposed to ground application, or indeed if they chose to be an organic grower and not use anything.

**The Hon. J. R. JOHNSON:** But is aerial spraying widely used?

**Mr FAYLE:** No, it is not. It is used to a very minor extent, but I would say that the vast majority of aerial applications of anything in our industry are in the nature of fertilisers and trace elements, rather than pesticides. And even that is not a large usage.

**The Hon. J. R. JOHNSON:** What is the major disease that affects the industry?

**Mr FAYLE:** You would perhaps appreciate that this tree crop originated and evolved here in this subtropical rainforest region, so there is a reasonably natural balance of both insects and diseases. So, if I can try to answer your question directly, in the disease area there

are two principal diseases with which we are concerned. There are a larger number, but there are two that have a significant economic effect if we do not maintain proper controls.

The first one is botrytis. Excuse me if I do not give the correct botanical names. Botrytis is a disease of the flower. If you get particularly wet conditions during flowering times, then the fungus can attack the flower and destroy the oncoming crop. So that in fact you can have a crop failure if botrytis gets out of control.

The second – and probably equally significant – problem is known as husk spot. Husk spot is another fungal organism that attacks the developing fruit and causes premature drop of the fruit. Under adverse weather conditions, it can also cause something like a 50 per cent or greater reduction in the crop.

**CHAIRMAN:** So you use fungicides mostly, rather than pesticides?

**Mr FAYLE:** We use fungicides for those. The question was related to diseases. I could give you a similar answer concerning insects, if you would like me to do so.

**The Hon. J. R. JOHNSON:** What is botrytis caused by?

**Mr FAYLE:** Botrytis is caused by a combination of weather conditions – particularly moist weather continuing with a particular weather regime over an extended period. In this part of the world, flowering typically occurs around about the end of August or early September. This area is known, generally, for having a dry spring season. That is the evolutionary condition that brought this tree into bearing. So botrytis only affects the crop in some years – probably one year in five, or even less frequently.

**The Hon. J. R. JOHNSON:** What was your major concern in coming before the Committee?

**Mr FAYLE:** My major concern was to ensure that there is factual information presented to the Committee, so that you will have a clear understanding of the issues as seen by our industry – to ensure there is not what we would regard as unreasonable legislation, or legislation that might unduly inhibit our wellbeing. We recognise that there is a duty of care and all of the other things applying. I think you will find that we are a quite responsible industry.

If I could perhaps develop my answer a small amount. If I could use the area of insects and diseases in the same sense: pesticides, of course, incorporates all areas, including herbicides. But just looking for the moment at insecticides and fungicides: these have always been something in respect of which we try to achieve an eco-balance. As I mentioned, this is a naturally occurring tree crop. We have a very wide adoption of the integrated pest and disease management principles.

That may seem to be a bit of a jargon thing, but essentially it means that, to a very high degree of adoption in our industry, we employ pest and disease scouts. Either individual farmers have these skills, or they contract that service out to professional people working in the field – and there are a number of them in this area – to come and monitor what is going on in your crop. They do this on a regular basis, depending on the time of the year and which particular insect or disease may be an issue. So they will physically do a bug count, or a

disease risk assessment. They will count not just the beneficial or problem-causing insects, but both, and will determine from that insect count what we describe as an intervention level.

An intervention level is where you determine that the eco-balance is no longer satisfactory and that you are at risk of suffering significant commercial loss if you do not take some corrective action to effect that balance. So the individual farmer will have to select from the range of options available to him what he will do. Those options include both “soft” and “hard” chemicals. We choose not to take an ideological view on this again. But, in the area of soft treatments, you do see predator insects being introduced into orchards. You might see some so-called soft chemicals – things like a petroleum oil spray, which generally will be regarded as a soft chemical. Or there is a particular bacteria known as *Bacillus thuringiensis*, which is a synthesised bacillus. It is ingested by the caterpillars, causing the caterpillar to wither up and die, so that they will not eat our flowers or developing fruit. There are a number of options in this area that we use, and use quite extensively.

However, there are some insect and disease pests for which we have not yet been able to find any such treatments. For those ones we may have to apply a so-called hard chemical. If I could develop that a bit. One of the insect pests that we have is known as a fruit spotting bug. A fruit spotting bug is quite a difficult pest to deal with. It has been causing problems in other crops in this part of the world. It tends to attack most subtropical fruit crops.

One of the most effective chemicals for the treatment has been endosulfan, which is a registered product for use in our industry. It tends to attract the ire of the environment movement because it comes from the family of chemicals known as organochlorines. We have done quite a bit of research into this product, because clearly our members do not wish to expose themselves unnecessarily to risk, and they certainly do not want to put a food safety question mark on any of the crops that we produce. So we have examined the effect that endosulfan has, both on the beneficial insect population, and we find it to be the softest of all the chemicals that we use on the beneficial insects. So it actually helps us with our integrated pest disease management program.

We have had a very exhaustive look at the evidence that has been presented to the National Registration Authority on risks to the food safety chain, including the operators, and found there to be no evidence to concern us, providing that the product is handled in accordance with the label. To put it in perspective, we are though a very minor user. Many farmers do not spray at all because they will do this insect monitoring that I have mentioned and find that they have not in fact reached the threshold that requires some action.

If I could quote my own farm as an example. During the last twelve months I have used one application of endosulfan, back in the time of round about October, if I can remember the dates correctly. And it is not uncommon for there to be one or two applications of some form of pesticide during a season. So we are a very minor user. But, nevertheless, we do use them.

**The Hon. J. R. JOHNSON:** Do you grow other crops in between the macadamia trees?

**Mr FAYLE:** Most growers do not. The land up here is very expensive, and people tend to plant the trees at the maximum density that they can to achieve a commercial return.

**The Hon. J. R. JOHNSON:** Do you employ contractors or day labour?

**Mr FAYLE:** The decision is one for the farmer. There are many operations that handle everything themselves. That is, the individual farmer does all his own work. But there are certainly plenty of people employed in this area. It is one of the largest employers in the farming sector in this part of the world. In fact, in this part of the world, that means one of the biggest employers. So you have people who are directly day labour, or permanent staff on farms. But then there is another option for people, and that is to employ a contractor to do this type of work. So you can access through the normal channels a choice of several people to apply either ground or aerial or whatever application techniques you want to use.

**The Hon. J. R. JOHNSON:** Are your employees monitored for health or any deterioration in their health? If so, what is the basis of that monitoring? Is it regular, or irregular?

**Mr FAYLE:** The choice to do that is one for the individual farmer. If I quote my own case. I have an annual checkup, and I have a blood test taken at the time when I have most recently been doing any spraying, to ensure that I am not placing myself at risk. I have never had any detections of anything in my own personal wellbeing. But I could not answer for the rest of the industry in that regard. It is a personal choice that exists between the individual employer.

**The Hon. J. R. JOHNSON:** Are your staff checked?

**Mr FAYLE:** On my farm, my staff is essentially myself and my wife. We both do that.

**The Hon. J. R. JOHNSON:** I hope you are getting your wife checked too!

**Mr FAYLE:** Yes, indeed.

**CHAIRMAN:** Does the Department of Health do that here? With some apple orchards, the Department of Health actually comes and does a free campaign.

**Mr FAYLE:** That has not happened here. The onus is on the individual, and that is done through your local general practitioner or local hospital.

**The Hon. I. COHEN:** Could the industry in this area survive with ground application of chemicals only?

**Mr FAYLE:** If we take the current season as a good example, we have had quite extensive rainfall, starting in January, and it is continuing now. I don't know whether it will continue for too much longer, but I hope not. It comes down to the question: How urgent is it to apply a particular product at a given time? You would understand from this integrated pest management program that I described briefly that the intervention level is at quite a critical moment in time. If you do not take corrective action when you reach that point, you can lay yourself open to quite substantial commercial risk.

If the weather conditions permit, you can certainly apply product from the ground. There is no question about that. That could be imposed, if you like. There are cost differences – although, as I said, very few people use the aerial application anyway. Certainly,



as far as I am aware, you can apply those products very much more economically by aerial application – but often by helicopter, I would say, rather than necessarily by aeroplane.

**The Hon. I. COHEN:** Have you experienced that? The Committee heard at Gunnedah that there were some people objecting to the supposedly better option of the helicopter rather than the crop dusting aeroplane, because the down winds from the helicopter stirs the chemical up, atomises it and so on. Have you had experience of this?

**Mr FAYLE:** No, I have not. As I said, almost all of the aerial spraying here is to do with fertilisers, not pesticides. So I don't think there would be very much practical experience here to give evidence one way or the other.

**The Hon. I. COHEN:** I heard what you said about the value of the land and that therefore you essentially go for a monoculture.

**Mr FAYLE:** I would have to object. We do not do that. Part of our integrated pest management program is to encourage growers, although we are planting what appears to be a single species ----. If you take my farm of 3,000 trees, there are six different varieties within that. The windbreak trees around it, and the general vegetation that surrounds the farm is selected to have a quite significant amount of biodiversity.

**The Hon. I. COHEN:** Are the pests that you were describing something that naturally attacks the macadamia tree? Given that it is an indigenous species in this area, I wonder what your group's view is on looking at a greater variety in crop production that somewhat is mimicking original circumstances. Therefore there might be production of certain rainforest timers, associated with the macadamia crops. Is that something that your industry has investigated?

**Mr FAYLE:** If I could answer it this way. For one of our research projects I mentioned that we have a levy to assist research into the examination of the question of germ plasm and the natural condition under which macadamia trees still grow and evolve, and the protection of that germ plasm, because that is Australia's greatest natural advantage in this particular international trade. We have such a natural advantage that we can do our tree breeding based on that broad germ plasm base.

**The Hon. I. COHEN:** I hope you tell Monsanto that.

**Mr FAYLE:** The question of whether we would consider doing some other activity on the farm is still very much the individual's choice. If I could quote my own example. On my farm I have a registered timber plantation under the State Government Plantation Act.

**The Hon. I. COHEN:** It is a joint venture, is it?

**Mr FAYLE:** No, it is a private one. That plantation has been selected under the Greenhouse Allies Project, with which you may be familiar, to understand the sequestration of carbon and those matters more fully. Now, there have been only a small number of people selected for that from right round the nation, and it just happens that I am one of those. But you will find in our industry quite a diverse group of people who come from not just necessarily a farming background, but people who are interested in all the things that you talk about.

Generally speaking, the end result seems to be that if you want to do this type of commercial operation, and you are trying to produce food on a reasonable scale, and you are trying to do it in a way that is economic, then it is very hard to incorporate the full concepts of the permaculture example, which I think you are perhaps alluding to.

**The Hon. I. COHEN:** Some variation on that.

**Mr FAYLE:** With some variation on that. If you can incorporate the same equipment that you need for one enterprise, as you can appreciate, to do any one thing you have what is referred to as an enterprise cost. The enterprise cost includes all the machinery and so on that you need to make that one thing work effectively. Generally speaking, the consumers out there require product that is as cheap as possible, otherwise you cannot sell any of it. That generally drives you down the track of trying to concentrate on one product and trying to do that as best you can.

**The Hon. I. COHEN:** Have you investigated the market for organic produce?

**Mr FAYLE:** If I could explain briefly. The Australian Macadamia Society does not actually sell any product. We represent the members within the industry – some 700-odd members. The actual selling of our product, our crop, is handled by individual companies within our industry who are members of our Society. These people generally process the product and sell it, and they are the marketing arm of the industry. We do not have a single desk operation or anything of that nature; it is just an unregulated market.

The individuals are always looking at those sorts of issues, to see whether there is a market niche that can be satisfied, and whether it is economic to do so. Certainly, the evidence at this stage is that it is not economic to grow in an organic way. If I could give some illustration of that point. While we do have this very proactive approach to integrated pest management, and we have a number of research projects examining the life cycle of these different insects and diseases to see if we can find a good way to fix them up, we have nevertheless come to the conclusion that if you are going to grow a product to the required standards that are there in commercial land, the reality is that you have to be prepared eventually, if the situation turns that way, to use a pesticide.

Those who have chosen not to use pesticides – and there are certainly some in the industry, and we do have a number of research projects trying to develop this further – find that they have to reject something in the order of between 40 and 60 per cent of their production as being unsatisfactory and having to be used for perhaps production of oil or something like that. That is quite a big penalty for them. So, while you can achieve quite a lot in the reduction of the use of pesticides, we have in practice [found] that it is very difficult to achieve a complete production by organic means.

**The Hon. I. COHEN:** Is your industry a heavy user of rodenticide? Have you investigated, or is anyone aware of, the impacts that that has on the immediate farm, to neighbours and in particular to wildlife such as birds of prey and the like?

**Mr FAYLE:** Thank you for asking that question. It is the subject of a quite recent research project that we have taken through the Queensland University of Technology, funded once again out of our growers' pockets. That research has been to examine alternative ways of managing the rats that are a significant problem for us in our orchards, or have been.

This research was quite comprehensive and involved the trapping and dissection of thousands of bodies of rats to see what they were eating, and where, and tracking them with mechanisms. The outcome of that research – which is now being quite widely adopted – was that we discovered is that the rats that are doing most of the damage, something like 90 per cent of damage, are coming into the orchard from adjacent habitat and that that adjacent habit tends to be typically scrubby sort of country, with a bit of lantana and rubbish or unkempt neighbouring properties.

So, if we can maintain a piece of relatively clean land, something in the area of 20 metres wide, then the natural instinct of the rat – which is not to expose itself unduly to risk – tends to preclude them coming across that open ground. So we have found that by applying just general clean-up techniques, getting in there with a brush hook and a slasher, and using some herbicide if necessary to control that undergrowth, has in fact produced an outstandingly good result. We have been able to make it more or less unnecessary to use rodenticide.

We were indeed concerned about rodenticides. As you quite rightly might point out, they are quite a nasty product to have out there in the environment. We do have a couple of registered rodenticides for use, so that they can still be used. So we now rely largely upon the use of what is referred to as the multi-feed rat baits, rather than the single feed rat baits, the sort of stuff that is used by the general urbanites who think that you have got to kill the rats with one bite.

The evidence seems to be that if you rely on a multi-feed bait, so that the rat has to come and eat several times, that the rat is able to metabolise the poison that it is getting, and if it is then eaten by a predator bird, for example, the amount of rat poison in the carcass is unlikely to cause death or injury to that secondary animal. So it has been quite a happy story for us. It is in fact illustrative of the approach that we take generally to these sorts of problems. I hope you find it is responsible.

**The Hon. I. COHEN:** As a farmer, Mr Fayle, if there are changes in the Pesticides Act, who should be responsible for chemical trespass? Are we looking at the owner of the land, the person who applies the chemical, be it a crop dusting pilot, or the agency, such as the Environment Protection Authority, that gives permission to use the chemicals? Would you care to comment on that?

**Mr FAYLE:** When you use the expression “chemical trespass”, would you like to define that?

**The Hon. I. COHEN:** Chemical trespass is where any overspray, for whatever reason, may go to another property or affect other people. If that is proven, who should be responsible?

**Mr FAYLE:** The view of the Society and the industry at large is that we would not wish to defend anybody who is not abiding by the rules. If we find that there is a cowboy out there somewhere who has caused such a problem, then they should be prosecuted, and we would not defend them in any way. The questions of who should do it, and how it should be done, of course are much more complicated things.

I, in fact, have wondered myself, with the introduction of the National Registration Authority and the rules surrounding the registration of product, and the shift from New South

Wales Agriculture to the Environment Protection Authority for the regulation of that, whether the Environment Protection Authority is in fact the right government department to do that.

**The Hon. I. COHEN:** Who would you suggest?

**Mr FAYLE:** I do not know that I am sufficiently knowledgeable to make a sensible answer. What I could say is that, if we are really talking about a law and order type of question and the way in which something is enforced – if there is a regulation in existence, then who is going to enforce it? – the Environment Protection Authority, to me anyway, and perhaps I am ignorant in this area – seems to me to be a body that is likely to be much more focussed on one side; it is not likely to be a completely independent body.

I have heard others saying that they do not think the Environment Protection Authority is tough enough. I could not comment on that. We have up here an Environment Protection Authority person who investigates any reports of people doing the wrong thing, and we invite them to come along to field days and to speak to our members and to help educate people. That goes on all the time, and we take quite a responsible position there. But, somehow or other, I think that it is more of a policing type of role than the Environment Protection Authority is able to have.

**The Hon. J. R. JOHNSON:** What happens to the husks and the shells? Is there a market for them or something?

**Mr FAYLE:** I suppose we are fairly fortunate in that the nature of the crop does not produce any significant amount of waste. The husk, the outer part of the shell, is stored on the farms, composted on the farms, and generally applied back under the trees as a form of fertiliser. Some of it is sold off the farms to nurseries – for example, for use as an ingredient in potting mixes or in landscaping. The shell is treated in a similar way but, being very hard, it is not very suitable for use back on the farm itself, other than just as an ornamental type of dressing on a garden around the house.

Most of the shell in fact is sold to the local meatworks at Casino, or other similar users. They use it as a furnace fuel source. It has quite a high calorific value. Any reject kernel that is in it is quite high in oil, so that it burns with a very high temperature, and is a very clean burn. There have been a couple of companies that have examined the use of it in composite materials as well, but that has not been possible yet because there is not enough of the stuff. Although it appears a lot to us, the companies that are doing that require many thousands of tonnes, which we do not have.

**CHAIRMAN:** I thank you very much for your time and for your evidence. We had a number of questions that we intended to ask you to take on notice. I am not sure how many of those you have answered, or answered as completely as you might like. Have a look at those questions, and when you send back the transcript with any corrections you make to it, you might comment on some of those questions that you consider you have not covered already in this hearing. Those questions are:

1. *Has the Australian macadamia Society given any consideration to planning measures that could be introduced to alleviate conflict about pesticide use and application?*

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2. *What is your response to the view that buffer zones are an impediment to industry achieving best management practice with respect to chemical trespass?*
  3. *What is the industry's view concerning the feasibility or otherwise of the legislative and policy amendments outlined in the Environment Protection Authority's discussion paper?*
  4. *Can you outline your industry's position with respect to section 4.4 of the discussion paper concerning shared liability in the misuse of pesticides?*
  5. *Do you have any examples where best management practices in your industry have improved the use and management of pesticides?*

(The witnesses withdrew)

**DONALD JOSEPH WANT**, Representative, Toxin Action Group and National Toxics Network, of 309 East Bonville Road, Bonville, and

**ANN THERESE WANT**, Private Citizen, of 309 East Bonville Road, Bonville, sworn and examined:

**CHAIRMAN:** Mrs Want, what is your occupation?

**Mrs WANT:** Wife and mother.

**CHAIRMAN:** In what capacity are you appearing before the Committee?

**Mrs WANT:** As a private citizen.

**CHAIRMAN:** Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

**Mrs WANT:** I did.

**CHAIRMAN:** Are you conversant with the terms of reference of this inquiry?

**Mrs WANT:** Yes.

**CHAIRMAN:** Mr Want, what is your occupation?

**Mr WANT:** I am a director and engineering manager of a local company.

**CHAIRMAN:** In what capacity are you appearing before the Committee?

**Mr WANT:** Both as a private citizen and as a representative of the Toxin Action Group and the National Toxics Network.

**CHAIRMAN:** Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

**Mr WANT:** Yes.

**CHAIRMAN:** Are you conversant with the terms of reference of this inquiry?

**Mr WANT:** Yes.

**CHAIRMAN:** If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into confidential session. However, I would have to warn you that Parliament can override the Committee's decision and make your evidence public later. However, it has not done so to date. Would you like to make a short statement before members ask questions?

**Mr WANT:** Yes, Mr Chairman. We have already made a submission dated 26 January 1999. The submission firstly referred to the need to recognise people's rights to breathe clean air

without having to breathe chemical vapours from any neighbouring use of chemicals. A current example is where one farmer has full rights to apply any amount of pesticides at any time, right next door to a local high school. As long as this one farmer applies all the pesticides, or simply assures he does, as per the label instructions, the approximate 450 students and staff have absolutely no recognised rights to stop him to ensure they are not exposed to spray, vapour or blow drift. Such chemical mixtures can travel for kilometres, let alone five metres.

This gross lack of rights has already seen one chemically-sensitive student having to be withdrawn. The coming spray season and the expanding farm activities will potentially have gross effects on the remaining population. No government department can assist the young students or staff to prevent exposures under existing legislation and antiquated exposure risk assessment protocol. There would appear to be no direct assessment nor direct studies done on the possible health effects on exposed people, especially those chemically sensitive, when developing label instructions.

The submission also referred to the huge amount of literature on the existence and acknowledgment of the condition known as multiple chemical sensitivity (MCS). The deliberate total disregard of this condition by our pesticide assessment process, the EPA, Health Departments and Pesticide Act, illustrates a gross deficit of logic and scientific approach. At the very least, one would expect that health professionals would take such literature into account as a precautionary approach rather than rely on the chemical company sponsored studies which always conclude on low toxicity for intended use and have been shown to be flawed in the past. Surely the pesticide must be treated as being guilty until proven innocent, not the other way around.

There are a number of examples where the Health Department has gone to great lengths to counter public concern on various health effects from low level chemical exposure. Deliberate public deceit, misrepresentation of data, and poor treatment and investigation of chemical exposure concerns are numerous from the Health Department. Since the EPA refers exposure concerns to the Health Department and National Registration Authority, then the National Registration Authority refers people to the EPA and Health Department, it seems that the Health Department has taken on the task of combating public concern.

Neither the public nor State government departments seem to be able to be given the full details of what the public is exposed to in any one pesticide which typically consists of many individual chemical types. It is quite an amazing situation then for the EPA to monitor and the Health Department to be able to assure the public of their safety. This, combined with the chemical company issue of deceiving and incorrect information, is a significant example of public deception and lack of rights, for example, trimethylbenzene had been found in three children with unexplained health problems in Coffs Harbour and was confirmed on two separate occasions by the chemical company as not being present in an aerially sprayed pesticide, yet it was found, eventually, to be present in the pesticide analysis.

Furthermore, one can only assume that, since the medical profession has no training and is ill-equipped to diagnose chemical sensitivity, these are the reasons for the unfounded sarcasm and intimidation exhibited to effected people. A definite trend has been noticed in the number of parents of affected children being labelled with psychological conditions such as Munchausen syndrome. This is a convenient scapegoat for the medical and health systems to avoid the complexities of dealing with chemical sensitivity problems yet adds to the affected families dilemma of dealing with affected children and a system which is now proactive in trying to suppress their concerns and can, and has, disintegrated such families.

As a concerned family ourselves, we are currently encountering such treatment from all departments. We have not settled for illogical responses and total avoidance of answers from such departments. As a result we are being treated shockingly and it is obvious that such departments have written us off. One then wonders about the objectiveness of this Committee. Has this Committee perused the vast amount of literature, acknowledgments and findings which establish the varied effects of low level pesticide exposure on humans, or is the Committee going to rely on the advice of the seemingly non-objective self-interest groups within the government departments attempting to suppress such? We are not aware of any experts in this area in the government departments. The few doctors who have tried to learn, study and help the people affected would be the most authoritative.

Although there have been many, many reports to the EPA and health departments over the years of health effects and concerns from pesticide usage, there is no official database nor feedback system to the National Registration Authority which is in place statewide in the EPA or health departments. This has been checked last week after receiving a statement from the Hon. Craig Knowles, MP, Minister for Health, dated 29 June 1999, that there was a system in place!

When the final draft of the National Health Monitoring Program for Agricultural and Veterinary Chemicals was distributed nationwide the health department was specifically singled out after being asked relevant questions regarding health monitoring—"...notably, New South Wales health failed to send a written reply despite repeated approaches." How far does such determined suppression go? There are, and will be, no records kept so there are no records of any people affected, so there are not any problems. Is this what our State government's approach is for continued inaction and suppression?

**Document tabled.**

**CHAIRMAN:** Ann, did you want to make a statement?

**Mrs WANT:** No.

**The Hon. I. COHEN:** Given that Coffs Harbour has had quite a history of pesticide problems over many years, are there any facilities, either government or private, in the Coffs Harbour area that can monitor these issues of low level chemicals in blood streams, et cetera? Where do you have to go to get any real scientific information?

**Mr WANT:** Before I answer that specific question, might I say that this problem is not only in Coffs Harbour. Coffs Harbour initially hit the spotlight when cleft palates and birth defects hit the media. There was a lot of activity from people then trying to bring up these facts, which were being quietened down. We get reports from all over the north coast as well as from the rest of the State and interstate.

With regard to the monitoring of the children in Coffs Harbour, there has been an attempt by the parents of these children with unexplained health problems to try to go through the established medical system. For example, we ourselves went up and down to a Sydney Children's Hospital for years, trying to get to the bottom of what was happening with two of our five sons, and we came up with nothing.

We then went to what we thought at the time was the extreme of having a look at chemical residues, because of the birth defect worries, and we had to actually send those blood



samples to America to get them analysed at the time – although I do understand that there is some limited testing available here in Australia. In respect of people or organisations monitoring, I do not know of any. At one stage the Health Department had got approximately seven families in Coffs Harbour together who had children with unexplained problems, with significant levels in their blood of pesticides, and the Health Department promised to investigate them all and issue a report on those investigations. The department then went about getting all our records and so forth, but we heard nothing more – despite repeated requests over years for the report.

**The Hon. I. COHEN:** You were rather scathing of the position that some government departments have taken. Do you have any evidence on that point? Perhaps you could furnish the inquiry, whether orally now or on notice, with that information.

**Mr WANT:** We can supply many letters from such departments. By the way, in my occupation every day I deal in factual information. I deal in facts and scientific approaches. My background is fluid mechanics. I deal in vapours, liquids and so forth, change of phase. I have written papers on spray vapour and blow drift. I also deal in heat transfer of hydrocarbons, chemicals and so forth. I therefore have a good background behind me to ask relevant and scientific and logical questions of such departments.

The quality of the replies over many years from such departments has been absolutely appalling. I cannot get my questions answered. I keep getting flowery political types of letters back, wiping over all of my concerns, but I cannot get specific answers. But, yes, I can supply such information on notice.

**The Hon. I. COHEN:** In terms of your neighbour who is using chemicals, could you explain to the Committee what may be adequate in terms of change of practice to alleviate your situation?

**Mr WANT:** We started out in our particular family situation where our neighbour started applying these pesticides to his crops straight over the fence. We simply asked him for advice, prior to him spraying, so that we could at least vacate our children and prevent them from being exposed. It is all very well to be worried about spray drift, but with the ground application of pesticides the spray drift has been minimal and that has never been our concern with our neighbour. The vapour drift, however, has. It is the vapour drift of the volatile components of each chemical that has always been our problem. It is the solvents and the surfactants, not so much the active ingredients.

For example, Tilt, which already has been talked about today, consists usually of 25 per cent of propiconazole. Propiconazole itself is very non-volatile. However, the solvents and surfactants in Tilt, comprising the remaining 75 per cent of the mix, are extremely volatile, and they will produce vapour drift from the time of application through to days and possibly weeks afterwards, depending on weather conditions and solvent types.

So, simply, we wanted warning prior to application – 24 hours would have been nice – and none was able to be given. The Environment Protection Authority said it had no rights to demand such, and that it could not enforce such a requirement. We also suggested that we come up with alternatives, for whatever the farmer wanted to do, and that we would contribute to any additional costs of such pesticides. The farmer dug his heels in and said, “It’s my right. I can do anything I like.” So we came up against a brick wall there.

We then tried to go through mediation. The farmer would not mediate. We had been going through the Environment Protection Authority and the Department of Health systems and also eventually to the National Registration Authority. We experienced what everybody else seems to experience in this convoluted system between government and the federal agencies: we go to the Health Department, and it says, "Go to the EPA."; we go to the EPA and it says, "Go to the Health Department or the National Registration Authority"; and we go to the National Registration Authority and it says, "Go back to the EPA or the Health Department." No-one will really address the concerns of the assault on our children from such pesticide application. Our children have no rights, and his pumpkins have every right.

**The Hon. I. COHEN:** If there is a change to the Pesticides Act – and you have painted an interesting scenario of buck-passing all the way along the line – who should be responsible? You are saying that the Environment Protection Authority claims it has no power, but should that agency get more power and at the same time be responsible in case of chemical trespass? Could you describe to the inquiry what you would like to see as the impact of a revamped Act?

**Mr WANT:** There are several steps that have to be taken. It is not a case of saying that one department should be responsible.

**The Hon. I. COHEN:** I am looking also at the applicator and the landowner as well, so would you include reference to that in your response.

**Mr WANT:** Right. In respect of administering rules, I do believe it should be resting with the Environment Protection Authority to administer it. However, it is simply a toothless tiger, without any oomph behind it to do anything in these cases. However, the recognition of health effects, particularly on children and chemically-sensitive people, must be acknowledged first of all in any regulations or by the government. There is now a critical mass of literature and research out there which shows these effects and the existence of chemical sensitivities. To simply keep turning a blind eye to this amount of literature is illogical. So there must be recognition of these people and the effects, and, yes, then a strengthening of the rights and of the Environment Protection Authority then to administer.

Also, the Health Department must come into the equation somehow, because if it is truly a Health Department then health is the number one effect of this sort of exposure. The National Registration Authority says that it does a proper assessment first-up on these chemicals when it first receives the application. It is all very well to make that assessment under conditions in a sterile laboratory, with one chemical or active ingredient at a time - all done by the chemical companies, which have been shown to have falsified previous testings on numerous chemicals – then go ahead and approve that chemical for usage, then have absolutely no feedback system thereafter – unless there has been a tremendous public outcry or something like that from so many people affected.

**The Hon. I. COHEN:** You have described some pretty horrendous reactions in respect of incidents with children. Is there any evidence that this problem could be from sources other than chemical contact? Could you elaborate on that?

**Mrs WANT:** We had been aware of the chemical impact for nearly 10 years, and the consistency is there. Andrew is an example. Whenever he is removed from chemical exposure his health has stabilised, and whenever he is subjected to chemical exposure we get

the same symptoms, of headaches, rectal bleeding, nausea and depression. In a chemically-controlled environment, he is fine.

Presently, he is at home in a controlled environment, because we have had to withdraw him from school. We did request that the farmer inform us when he was spraying. We explained the effect that it would have on Andrew. The farmer's response was that he has got a business to run, he hasn't got the time to go running to the phone every time he wants to spray, and that the effects on Andrew are our problem, not his. So, can't we try to keep him at school? His health went down, and I have it documented. We have withdrawn him from school, he is now doing distance education for medical reasons, and he is a different child health-wise because he is in a controlled environment.

Every time he is drawn from exposure to chemicals, to pesticides in particular – because he is also affected by other solvent-based products, such as deodorants, chemical cleaning agents, et cetera – his health and wellbeing is completely different and improved. I call it observation and intelligent thought.

**The Hon. J. R. JOHNSON:** How old is Andrew?

**Mrs WANT:** He is now 13.

**The Hon. J. R. JOHNSON:** So he has had this sensitivity for 10 years?

**Mrs WANT:** We have been aware of it for 10 years. As I said, he had quite a lot of unexplained health problems from the time that he was a young baby.

**CHAIRMAN:** Is the problem from a farmer neighbour at the school or at the farm?

**Mrs WANT:** Initially, last year, we had problems with our neighbour. He seems to have accepted our point of view from around Christmas time on and has respected Andrew's needs. But then, in October last year, the school that Andrew was going to, which was surrounded by bushland, was all clear-felled and a banana plantation was put in. So we encountered another problem. What was frustrating there was that the school ----. To accommodate a chemically-sensitive child takes a lot of co-operation, and the school had done everything it could to accommodate Andrew to enable him to go to school. The primary school did the same; they accommodated him quite successfully, and he was able to go through primary school. And the high school has accommodated him quite successfully. But the farmer was being completely uncooperative.

If we had known when he was spraying and what he was spraying, we could then have decided whether to send Andrew to school on those days – which he would not have gone. We would have withdrawn him temporarily and then sent him to school after the problem had passed. But not knowing, we were exposing him, and each exposure further weakens him.

**CHAIRMAN:** Was the chemical Tilt used on the bananas or on the pumpkins?

**Mr WANT:** I made reference to Tilt on account of bananas being referred to in the past, and also part of the Health Department's clear-air bill of health type of thing, and press releases that they have been issuing in the past which did concern that particular chemical in Coffs Harbour.

**CHAIRMAN:** What was the chemical involved with the pumpkins, fungicide or something?

**Mr WANT:** It was malathion.

**The Hon. J. R. JOHNSON:** I note the concerns of parents at the Coffs Harbour Christian High School. Have there been any comparisons done with the other high school and the other Catholic school, John Paul II, is it?

**Mr WANT:** John Paul College.

**The Hon. J. R. JOHNSON:** Yes, John Paul College, and the primary schools?

**Mr WANT:** What do you mean – and epidemiological approach on health?

**The Hon. J. R. JOHNSON:** Yes.

**Mr WANT:** No, there has not. But, through the literature, you will find – even in a very recent article, I think, from the States ---

**Mrs WANT:** From Mexico.

**Mr WANT:** From Mexico, which compared school children from the upper valley to school children in the lower valley, where there was more pesticide usage in the lower valley compared with the upper valley, and there were quite distinct differences in neurological functions and fine motor coordination skills, and so forth. We can table that if you would like us to do that.

**The Hon. J. R. JOHNSON:** Have you made any inquiries of those schools for comparison purposes?

**Mrs WANT:** How do parents know, if a child is coming home with a headache, what is causing it? If a child's body is not fighting a virus, why isn't it fighting the virus? Why do we have to resort to antibiotics? Why are they developing secondary infections? What has triggered their asthma that day?

**Mr WANT:** You are hitting us with what we have been continually hit with as one of the aspects by the authorities. They are saying, "Where is your evidence? Where are your studies?" Then, when we produce the evidence or the studies, or similar ones from overseas, they then say, "You have got no qualifications to make those conclusions, et cetera" and we get written off all the time.

**The Hon. J. R. JOHNSON:** I was not trying to write you off under any circumstances.

**Mr WANT:** That is fair enough. But, for example, there is difficulty in a group of parents to ring up another school and say, "What have your health problems been with children?" As you know, chemicals can affect the immune system; it can either over-excite the immune system, which is a definition of allergic response, or it can depress the immune system, which then leaves the body open to normal viruses and bacteria that it would otherwise be able to fight, and therefore that affected person goes to the doctor and the

symptoms are diagnosed and the cause is missed. Chemicals can also affect people neurologically. The symptoms can vary from headaches through to fine motor co-ordination skills, et cetera. It can also affect the endocrine system and the reproductive system. Such a task is enormous.

**Mrs WANT:** Anecdotally, I am getting a lot of telephone calls from mothers who are concerned about chemical use around the schools. But anecdotal evidence does not seem to stand up with our authorities.

**CHAIRMAN:** Thank you very much for your time. We will post you a copy of the transcript of your evidence given at this hearing. Would you check through that for accuracy before we release it. But you might have a look at the questions that I will give you. If you feel that you have not answered those in your evidence today, you might add a note to the transcript. Those questions are:

1. *How has the New South Wales Health Department and New South Wales Environment Protection Authority viewed the medical conditions faced by your family?*
2. *How can local and State governments assist people with conditions of multiple chemical sensitivity?*
3. *What outcomes would you wish to see result from the Committee's inquiry process?*

(The witnesses withdrew)

(Luncheon adjournment)

**IAN MARTIN CAMPBELL**, Representative, New South Wales Banana Industry Committee, of 160 Byangum Road, Murwillumbah, and

**NEIL LEONARD TREVERROW**, Technical Specialist, New South Wales Agriculture, of 133 Boggumbil Road, Goolmangar, sworn and examined:

**CHAIRMAN:** Mr Campbell, what is your occupation?

**Mr CAMPBELL:** I have just retired, Mr Chairman, but I was the Chief Executive of the Banana Industry Committee up until 30 June last.

**CHAIRMAN:** In what capacity are you appearing before the Committee?

**Mr CAMPBELL:** As a consultant to the New South Wales industry.

**CHAIRMAN:** Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

**Mr CAMPBELL:** I did.

**CHAIRMAN:** Are you conversant with the terms of reference of this inquiry?

**Mr CAMPBELL:** I am.

**CHAIRMAN:** Mr Treverrow, what is your occupation?

**Mr TREVERROW:** Technical Specialist, Tropical Fruit, New South Wales Agriculture.

**CHAIRMAN:** In what capacity are you appearing before the Committee?

**Mr TREVERROW:** As a technical reference person.

**CHAIRMAN:** Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

**Mr TREVERROW:** I did.

**CHAIRMAN:** Are you conversant with the terms of reference of this inquiry?

**Mr TREVERROW:** Yes, I am.

**CHAIRMAN:** If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into confidential session. However, I must warn you that the Parliament may override the Committee's decision and make that evidence public. It has not yet done so. Would you like to make a short statement before members of the Committee ask questions?

**Mr CAMPBELL:** I would like to present a position statement from the New South Wales banana industry, and then make some comment about the terms of reference. I have a full submission with some attached papers that I would like to table.

**Documents tabled.**

**Mr CAMPBELL:** Use of pesticides in the subtropical banana industry has changed dramatically over the past 10 to 15 years. Though some pesticides are still needed to maintain our pest and disease damage at quality standards that are required by consumers and supermarkets, their use has been largely superseded by crop hygiene, pest and disease monitoring, and strategic pesticide application. This is a clear change of industry best practice since broad-spectrum pesticides such as dieldrin and arsenic were routinely applied during the 1950s, 1960s and early 1970s.

Integrated pest management and the introduction of new disease-resistant and pest-resistant banana varieties that suit the subtropical environment are now the industry's focus for the future. As early as the 1980s the New South Wales industry demonstrated its commitment to reducing pesticide use by banning the aerial spraying of insecticides. The industry has long supported the training of growers in the responsible use of pesticides.

Perhaps the industry's greatest shortcoming is that it has not successfully communicated its achievements to the wider community. In times when "scare campaigns" are more newsworthy than good-news stories, the subtropical industry, which has limited resources, has had to give priority to reacting to claims of irresponsible pesticide use, rather than publicising its own achievements. This has allowed outdated public perceptions of irresponsible pesticide use to persist. Public education and transparency are the keys to rational debate. The banana industry welcomes this opportunity to make a contribution to this inquiry.

I would now like to touch just briefly on some of the points of reference. The first one, of course, is the sustainability of agricultural industries that currently rely on intensive pesticide use. As previously stated, the subtropical banana industry does not rely on intensive pesticide use. The subtropical region enjoys an important comparative advantage over the tropical growing area of north Queensland and other banana-producing countries that produce the Cavendish variety.

The region's cooler climate reduces disease and pest pressure. As well, Cavendish lacks the pest and disease resistant qualities of new varieties that flourish in the subtropics. I will elaborate on that later on. Consequently, the subtropical banana industry requires less intensive control programs than its tropical counterparts: for example, subtropical banana plants need an average of four to five leaf spray applications a year, compared to 22 to 25 a year in north Queensland and up to 45 sprays a year in Latin American countries.

The amount of insecticide now used for control of banana weevil borer is only 10 per cent of the standard application of the 1970s and 1980s, due to the introduction of the stem injection technique developed through research conducted by New South Wales Agriculture and funded by our industry. The injection technique replaces the former method of spraying the base of the entire plant and surrounding soil with chemical.

New varieties, such as Gold Finger and others that are currently being evaluated, have been selected for their disease and pest resistant characteristics and require very little

application of pesticide compared with Cavendish. The subtropical industry realises it cannot compete with our friends in tropical north Queensland in the production of Cavendish, which is the main variety that we eat. However, Cavendish lacks the pest and disease resistant qualities of the new varieties that are now starting to flourish in the subtropics.

The second point is on the social health, environmental and trade interests of agriculture in the wider community. The subtropical banana industry has recognised and responded to community expectations of food safety and protection of the environment. Development of best practice standards, approved supplier accreditation and the introduction of quality assurance systems such as HASSAP and SQF2000 have been a prime focus for the industry over the past two to three years.

Grower participation and farm chemical user courses have been actively encouraged to protect them, their families, the environment and the wider community. These initiatives have improved the sustainability of the banana industry in the region and have improved future trade prospects, as expectations of consumers in the wider community related to food safety intensify.

Many growers are active members of local Landcare groups and have attended Farming for the Future and Property Management workshops. They have worked with the Department of Land and Water Conservation in developing approved land management practices to protect the environment by reducing loss of soil, movement of pesticides from the plantation and fertiliser runoff into waterways.

The third point is the role of pesticide users, local government and State agencies, et cetera. The banana industry has been involved in resolving local conflicts in relation to pesticide use through on-site meetings, public meetings, formal mediation, and to a lesser extent through the media. Usually, the industry's involvement has been in response to a claim of pesticide misuse made directly to the media, rather than to the banana industry, where the issue could have been addressed and perhaps resolved.

Reacting to media reports that highlight highly emotive claims is generally a difficult and unproductive task. The industry would strongly support the establishment of a forum to address the concerns of the community, whilst assisting the industry to respond more effectively.

The fourth point is related to opportunities for industry to address issues through research and development. Developing best management practice and new varieties has been a major focus of research and development and extension activity funded by the industry. Between 1993 and 1998 the industry allocated something like \$1.75 million to the National Banana Health Improvement project, to eradicate disease and develop improved plant health strategies. The recommendations of this project are now being implemented through the Australian banana industry.

Industry funds are matched by the HRDC for domestic projects. The subtropical industry also contributes substantially to international projects funded by the World Bank that aim to secure sustainability in the many countries where bananas are a staple food. In conclusion, Mr Chairman, I would like to say that our industry jealously guards our hard green product. We support this inquiry.



**CHAIRMAN:** Mr Treverrow, do you want to make a short statement before we ask questions?

**Mr TREVERROW:** No, Mr Chairman. We have been consulted in the preparation of the submission, rather than preparing a separate one.

**The Hon. J. R. JOHNSON:** The Committee was given information this morning that banana growers were being encouraged not to plant bananas in certain parts of the north coast. Is that correct?

**Mr CAMPBELL:** Not to my knowledge. There are a lot of natural problems: suitable land, proximity to the ever-encroaching urbanisation. Those are natural barriers. As I said in my submission, our future lies in the new varieties of bananas. We cannot compete with tropical north Queensland, and Cavendish, the main variety, is very much a tropical variety.

**The Hon. J. R. JOHNSON:** But they get tropical storms up there that knock all the stools over.

**Mr CAMPBELL:** That is right, and thank goodness they did this year, otherwise we would have seen the glut to end all gluts. But our future very much lies in these new niche market varieties that we are currently evaluating. Gold Finger is the first of those. I can assure you that there are a number of other varieties that are well in train. Those are varieties that do not suffer the same problem of leaf disease as is suffered by our Cavendish varieties. So we are very much encouraging growers in the subtropics to switch to those varieties.

**The Hon. J. R. JOHNSON:** Is there any restriction on bringing in suckers from Queensland?

**Mr CAMPBELL:** Unfortunately, we have a terrible disease called bunchy-top disease. Because of that, there is a quarantine zone covering the Tweed and Brunswick. We cannot bring planting material down from the north because they have a disease called sigatoka disease. So there are very severe restrictions on the movement of plant material.

**The Hon. J. R. JOHNSON:** Is bunchy-top a reportable disease?

**Mr CAMPBELL:** Yes, it is, under the Act.

**The Hon. J. R. JOHNSON:** Are there bunchy-top inspectors still available?

**Mr CAMPBELL:** The industry did for a number of years employ a gang of inspectors to go around on a regular basis and conduct inspections. We have now contracted that out to the ex-detectors, and that is funded by the New South Wales industry.

**The Hon. J. R. JOHNSON:** Are bananas still dipped?

**Mr CAMPBELL:** No. Some dipping is done. Perhaps Neil Treverrow could answer that question better than I.

**Mr TREVERROW:** At this stage most bananas are not dipped because the previous practice of doing that was to address diseases like squirter disease, associated with preparing

single bananas. Since the trade has moved to hands or clusters, that has taken away the need to do that dipping.

**Mr CAMPBELL:** If I might add that we now have to comply some very stringent ICA arrangements by which bananas have to be packed in a hard, green state to get our food into the Victorian markets, because of fruit fly. Of course, that does away with the necessity to dip.

**The Hon. J. R. JOHNSON:** Do we import any bananas?

**Mr CAMPBELL:** No, we don't. There is a small amount of dried bananas brought into this country. They are fried and dipped in oil, and they are used in dried food. We strongly lobby governments to keep bananas out of Australia because of the exotic diseases that virtually every other country in the world has. I mentioned earlier that we have to aerially spray our bananas down here four to five times a year. Latin American countries have to do it nearly every week of the year. So that is a very good reason to keep them out.

**The Hon. J. R. JOHNSON:** Is there still ground spraying by fellows with packs on their backs?

**Mr CAMPBELL:** There is a small amount of ground spraying that goes on, but you can only do that where there is relatively flat land. As you would appreciate, bananas are a tropical fruit, and they are grown on billy-goat country. You cannot effectively carry out the leaf spraying programs from ground rigs.

**The Hon. J. R. JOHNSON:** What is the main disease, other than bunchy top, that affects the industry?

**Mr CAMPBELL:** Here in the subtropics Lady Finger suffers from a fusarium wilt, commonly called Panama disease. There is no cure for that, despite the world tossing a lot of dollars at it. Bunchy top and Panama disease, and a few recent incursions of black sigatoka disease in north Queensland.

**The Hon. J. R. JOHNSON:** When you get Panama disease, how do you deal with the problem?

**Mr CAMPBELL:** You can't do anything, unfortunately. It is a disease that moves in the soil. Of course, animals, bird life and human traffic moving from an infected plantation to another plantation will introduce the disease. That is why you see a lot of signs around Lady Finger plantations, "Stay at the gate. If you want to come in, contact the farmer and he will bring you in in his own transport."

**CHAIRMAN:** So, if you get Panama disease, you basically have to close your farm down?

**Mr CAMPBELL:** Yes. In some plantations it is a little bit slower to infect the neighbouring plants. But, yes, once you have got it, it is a sentence.

**CHAIRMAN:** Do you have to quarantine the current crop?

**Mr CAMPBELL:** It has just been made a notifiable disease under the Act. There are all strains of course of fusarium wilt. The most severe is tropical race four, and that affects all varieties of bananas. Once again, that is a disease that some of our neighbouring countries have.

**Mr TREVERROW:** If I could add a comment, Mr Chairman. While Ian is quite right: with the current varieties the disease is very prevalent, one of the major criteria for selecting new varieties is that they have resistance to the fusarium disease, to provide an alternative, such as Gold Finger.

**The Hon. J. R. JOHNSON:** Is the Banana Growers Federation still the sole marketing agent?

**Mr CAMPBELL:** The Banana Growers Federation Co-op. No, it is still our biggest co-op in New South Wales, but the BGF now has a lot of clients in north Queensland as well as in New South Wales. There are numerous other marketing agents.

**The Hon. J. R. JOHNSON:** In Queensland they are not directed to the Committee of Direction?

**Mr CAMPBELL:** No, not really. All growers reserve the right to consign to whomever they wish.

**The Hon. J. R. JOHNSON:** Is that a recent change?

**Mr CAMPBELL:** I think so. As you are probably aware, the Committee of Direction went through some pretty torrid times. The QFEG does not have any wholesaler outlets. There are probably four major wholesalers. One is the Banana Growers Federation, or Banana Marketing Australia, BMA, as they call themselves; there is Chiquita; there is Lamana. There are a number of smaller wholesalers, but they seem to be falling off the line as we go along. Supermarkets have taken strategic positions to set up an arrangement with Pacific wholesalers who meet their SQF2000/HASSAP programs.

**CHAIRMAN:** They deal direct, not necessarily going through the Sydney markets.

**Mr CAMPBELL:** Yes. Unfortunately for all fruit and vegetable industries – and it is probably our own fault –supermarkets are sourcing direct from on-farm. It would be fairly easy to forecast the demise of the central marketing system – which, to my mind, would be a terrible thing to happen, but that seems to be the way it is going.

**CHAIRMAN:** I was Deputy Chairman of the Sydney Marketing Authority before I came to this job.

**Mr CAMPBELL:** You will understand what I am saying, Mr Chairman.

**The Hon. J. R. JOHNSON:** Where is the research into bunchy top mainly undertaken?

**Mr CAMPBELL:** Mainly through the efforts of Professor Jim Dale. We were told at our recent national banana congress – and correct me if I am wrong, Neil – that we have

already got a plant in the laboratory situation that is immune to bunchy top, but it will probably be another five to ten years before it is put out in the field for evaluation.

**The Hon. J. R. JOHNSON:** Are the banana farms in Western Australia affected by bunchy top?

**Mr CAMPBELL:** To the best of my knowledge – and I take it you are talking about Carnarvon ---

**The Hon. J. R. JOHNSON:** Yes.

**Mr CAMPBELL:** --- they have got their own set of problems, but bunchy top is not one, obviously because of the very stringent movement of planting material. The only material that they would get would be tissue culture material, and obviously it is free of disease.

**The Hon. J. R. JOHNSON:** Has any progress been made in relation to bunchy top?

**Mr CAMPBELL:** Yes. I would like to think Professor Jim Dale is within five or ten years of coming up with a plant that is immune to bunchy top.

**The Hon. J. R. JOHNSON:** Is it of paramount importance that bananas be sprayed?

**Mr CAMPBELL:** Yes. Obviously, the fruit, to be filled out to its maturity, has to draw its plant food from the leaf, and the more leaves that you have when the bunch is thrown, the faster and better that process takes place. A new variety, Gold Finger, which Neil mentioned, is one variety that does not suffer from the disease, as does Cavendish or Lady Finger.

**The Hon. J. R. JOHNSON:** Is there any requirement on those working in the industry with pesticides, herbicides, et cetera, to be monitored on a yearly basis, or more frequently, for health reasons?

**Mr TREVERROW:** As far as I am aware, there is no formal requirement. There are opportunities for growers to do that.

**The Hon. J. R. JOHNSON:** Is it recommended?

**Mr TREVERROW:** It is certainly recommended.

**Mr CAMPBELL:** A very large percentage of our industry have done the chemical users course. When we were employing the inspectors for bunchy top, as a matter of practice we used to have the gangs undertake blood tests each year, just to make sure that there were no problems.

**The Hon. J. R. JOHNSON:** In relation to farmers, particularly around the Woolgoolga area, who do not speak nor read English, are any arrangements made by the department for the interpretation of the directions on containers of various chemicals be made available in their own language or languages other than English?

**Mr CAMPBELL:** Not as far as I know on the label instructions. I think with our Indian growers – who make up a fairly large percentage of our industry – if mum and dad can't read, certainly the children can. We also have the local association of Woolgoolga, the chairman and vice-chairman of which are Indian growers. One of my directors, in my previous position of Executive Officer, was also an Indian grower. We hold a number of meetings, and things are put in Punjabi or whatever dialect they speak. So I think they are pretty well informed. I take your point with the older growers, but now most of the banana growers who are surviving are youngsters and they know exactly what is going on.

**The Hon. I. COHEN:** Mr Campbell, on the monitoring side: does your industry have any information or details or statistics on the health condition of your workers in the industry? Do you have any information that has been compiled at all? You have said quite clearly that there was a massive chemical problem up to a certain point and that then the regime has seen great steps forward. Do you have any information on that?

**Mr CAMPBELL:** I am sure I said "massive" in the sense of the past. I stated that our reliance on chemicals has dropped dramatically. As far as records of monitoring of growers and workers, no, we don't.

**The Hon. I. COHEN:** You mentioned that there was a lot of grower participation in what is effectively a system of self-regulation – which, obviously, can be the best way to go if you get industry people on side. But, do you see from your industry's point of view a need for tighter regulation of chemical usage and pesticide usage? Granted, the industry has improved – not just your industry. The pesticides that were used a generation ago is not a regime that we want to compare with, really, but look at the health of the whole of the community. Do you see, from your organisation's point of view, a role for specific regulation that could come about with amendment to the current Pesticides Act?

**Mr CAMPBELL:** Yes, certainly.

**The Hon. I. COHEN:** Have you got some details there?

**Mr CAMPBELL:** We certainly endorse the responsible use of pesticides. In my submission I mentioned that we are spending a lot of research and development dollars to find varieties that reduce reliance on chemicals. But also, of course, we have to produce a product that is acceptable to consumers. We would all like to be totally organic, but the reality is that you cannot grow bananas in commercial quantities totally organically. It is a subject close to my heart.

**The Hon. I. COHEN:** It is close to mine, too. Have you looked into any alternative pyrethrum-based and neem-based or natural materials that can do the job of chemicals, given that you have stated that there has been a massive reduction of pesticide usage? Is there the opportunity – which, in terms of niche marketing, must be a money spinner – to go into organics under certain circumstances?

**Mr TREVERROW:** In terms of looking at some of the alternative treatments in various projects on integrated best management that the industry has funded and investigated, there are compounds like neem that use that. A recently concluded nematode management project went through a suite of what are seen as potentially organic style treatments. Those opportunities have been looked at; they have not been ignored. In general, they have not been

highly effective either. I think that, rather, the direction that the industry is heading in is towards a more holistic approach to the growing of the crop and minimising the current use of pesticides. I have not found any of these alternatives which can stand alone.

The other point that I would add is that the industry has been quick to embrace the HASSAP approach to food production quality assurance. Within that, of course, the food safety components of those plans certainly ensure that growers keep accurate records of what their pesticide usages are and that they stand by the usage according to the regulations.

**The Hon. I. COHEN:** Mr Campbell, you mentioned that there were a lot of emotive complains about this problem that we are all trying to come to grips with – new settlement, different land use patterns, encroaching on traditional banana farming areas. There is still aerial spraying in Middle Pocket, and there has been a lot of complaint from that community. Could you comment on your perspective on that?

**Mr CAMPBELL:** I was deeply involved in that process some 18 months to two years ago. Middle Pocket was used by certain people who, I suspect, have a hidden agenda. It was very interesting. There was a letter from the community, the people who actually reside in Middle Pocket, that they were sick to death of being used as pawns in an issue that went far beyond Middle Pocket.

I might add too, Mr Chairman, that people tend to forget that banana growers are also part of the community. They have wives and children, and obviously we are not going to endanger our people. We are always seen to be the big bad guys. As an industry, there are fairly strict guidelines for aerial spraying, and if any aerial operator goes outside those guidelines, then we fully support the full wrath of the law.

**The Hon. I. COHEN:** One problem that has been raised with this Committee is that there are no clear guidelines about aerial spraying near roadways and that aerial spraying, by its nature, has to happen in the morning. There have been reports to this Committee that children on the school bus have been severely affected, yet, as I understand it, aerial spraying is still happening on extremely small plots. I have seen the plot in question at Middle Pocket. It is undulating land, but not overly steep for ground spraying.

I understand there is still aerial spraying on that site, and that there is still a great deal of concern in the community. How do we resolve that from your industry's point of view? Is it not a reasonable concern, in particular, that the pesticides legislation does not take into account roadways?

**Mr CAMPBELL:** I think you would be aware also that part of the result of the mediation process was that there was to be no spraying during school bus times. There was an arrangement between the aerial operator and members of the community that they would advise when it was likely that aerial spraying would take place. But you can appreciate that we can only do that in certain hours, and that that can change from hour to hour because of wind movement.

We are always willing to sit down and talk to communities to resolve these matters. Unfortunately, usually we are reacting to some media publicity. I was quite amused to see that the last news that depicted aerial spraying. Now, that was a shot taken many years ago down south. But, of course, it made very good footage for the opponents to aerial spraying.

**The Hon. I. COHEN:** I have inspected the site. What is the industry's objection, given the controversy surrounding the issue, to doing away with aerial spraying?

**Mr CAMPBELL:** In this particular plantation?

**The Hon. I. COHEN:** That particular plantation I think is a case in point, because it is extremely small and there are power lines just beyond it. It must be quite a feat for the crop duster to get out of there safely. I repeat, it is an extremely small plot, on what I consider is not a particularly steeply sloping piece of land, compared with a lot of other banana farms, in Main Arm Valley and such like. Why not do away with aerial spraying in the area? Why not give some support for ground spraying in order to indicate to the community that the industry has the best of intentions and achieve a greater degree of safety?

**Mr CAMPBELL:** I know the particular plantation that you are referring to. We actually went there and said, "It's a small plantation. Do you really need to do aerial spraying?" But this particular grower has his rights, and unfortunately I have no power to say, "Sorry, you can't have aerial spraying of your plantation." We all have individual rights.

**The Hon. I. COHEN:** In those circumstances, would you not think it appropriate that a government instrumentality would have the power to assess a circumstance like that – because children on their way to school have rights too?

**Mr CAMPBELL:** Where do you stop and finish with this? That is the dilemma, I guess, for government.

**The Hon. I. COHEN:** Would you not agree that taking a precautionary approach to the health of particular children in the community is where you would have to stop?

**Mr CAMPBELL:** Well, as part of the mediation in the Middle Pocket issue was not spraying during school bus times and not spraying near the bus stop. The kids could walk a few metres away from this bus stop, but one of the families said, "No, that's my kid's right to catch the bus there" and they were not going to shift. Why couldn't we just shift the bus stop? Everything seemed to be slanted to the suggestion that the industry had to make all the changes, but there was no willingness of the opponent to do anything in that situation.

**The Hon. I. COHEN:** Perhaps the established fact that spray drift can travel for some kilometres and cause chemical trespass would mean that moving the bus stop a hundred metres might be just like moving the deck chairs on the Titanic.

**Mr CAMPBELL:** That can be easily resolved if the Environment Protection Authority has monitoring stations to measure spray drift.

**The Hon. I. COHEN:** Does the Environment Protection Authority have monitoring stations at Middle Pocket?

**Mr CAMPBELL:** All I know is that there has been some publicity given to the Mullumbimby Creek area, and there have been a lot of claims in the media about spray drift there. But, to my knowledge, the Environment Protection Authority has monitored that and there is no spray drift. Unfortunately, that is not reported in the media.

**The Hon. I. COHEN:** On a related issue, what is your response to the view that people are saying that buffer zones are an impediment to industry achieving best management practice with respect to chemical trespass. How do you feel about instituting buffer zones and making them legislatively binding?

**Mr CAMPBELL:** Buffer zones obviously are a very good thing. The unfortunate thing is that we have inherited a lot of problems. I suppose local government has a lot to answer for too. But, I suppose if they had had a crystal ball they would never have approved residential sites close to existing banana plantations. You have the ridiculous situation now that you can have a plantation, and if the neighbour sells out and that property is subdivided, you can build very close to that plantation.

So, what is the farmer supposed to do? Is he to destroy X number of metres of his plantation to accommodate the law as it stands? I think there is a great responsibility for local government, before it gives approval, to look at existing land uses. The right to farm also comes into the question. We do have to feed ourselves. We tend to forget that.

**The Hon. I. COHEN:** In terms of these disputes that occur involving an allegation of chemical trespass and amendment of the Pesticides Act that will hopefully result from part of this inquiry, would you care to give the Committee an opinion as to who should be responsible if there is chemical trespass? Are we looking at the owner of the land, the pilot of the aeroplane that is spraying the chemical, or the Environment Protection Authority, which is the consent authority?

**Mr CAMPBELL:** I think we all have to take responsibility for our actions.

**The Hon. I. COHEN:** So would you say all three?

**Mr CAMPBELL:** There are not too many disputes that cannot be resolved by everyone sitting down and talking about the issues. The banana industry has been the first one to want to sit down and talk specifically. Aerial spraying is an emotive issue. We offered to do that very early in the Middle Pocket matter, but the opponents of that would only talk to us if they had the media present.

**The Hon. I. COHEN:** Were you involved in the mediation regarding that matter?

**Mr CAMPBELL:** Yes, very much so.

**The Hon. I. COHEN:** There was some concern that the mediation process went for 12 hours straight and that many people had to leave, so that it was not an adequate mediation process and that the result was not in keeping with what mediation should be all about. Would you care to comment on that?

**Mr CAMPBELL:** I am sorry, but I cannot agree with that. I think all the stakeholders were there. One person, who seemed to be driving the inquiry there, left the meeting. It was only after this particular person left the meeting that we came to what I believe was a consensus on how to get around the problem. We are always keen to sit down and resolve these problems.

**The Hon. I. COHEN:** Would you have an ongoing, regular meeting process at all regarding mediation with people?



**Mr CAMPBELL:** No, we don't. But we are always willing, as I said, to sit down and discuss a problem. What really gets me is that if there is a problem the first we know about it is when we turn the TV on at night.

**CHAIRMAN:** Thank you very much for coming and giving the Committee the benefit of your evidence. We will send you a copy of the transcript of your evidence in the next couple of weeks. You might check that for accuracy. At the same time it will contain a number of questions, which I will give you a copy of now, and I would ask you to respond to those questions if you feel that you have not responded adequately or at all in your evidence today. Those questions are:

1. *What is the industry's view concerning the feasibility or otherwise of the legislative and policy amendments outlined in the Environment Protection Authority's discussion paper?*
2. *What is your response to the view that buffer zones are an impediment to industry achieving best management practice with respect to chemical trespass?*
3. *Can you outline your industry's position with respect to section 4.4 of the discussion paper concerning shared liability in the misuse of pesticides?*
4. *What steps has the Society taken to promote the reduction of pesticide use by producers? Does the Society support the introduction of genetically modified crops to combat the pesticide problem?*
5. *Do you have any examples where best management practices in your industry have improved the use of management of pesticides?*

(The witnesses withdrew)

**JOHN ROLAND BEARD**, Director, Northern Rivers Institute of Health and Research, P.O. Box 498, Lismore, affirmed and examined:

**CHAIRMAN:** Professor Beard, what is your occupation?

**Prof. BEARD:** Medical practitioner.

**CHAIRMAN:** In what capacity are you appearing before the Committee?

**Prof. BEARD:** As an individual.

**CHAIRMAN:** Did you receive a summons issued under my hand in accordance with the provisions of the Parliamentary Evidence Act 1901?

**Prof. BEARD:** I did.

**CHAIRMAN:** Are you conversant with the terms of reference of this inquiry?

**Prof. BEARD:** I am.

**CHAIRMAN:** If you should consider at any stage during your evidence that, in the public interest, certain evidence or documents you may wish to present should be heard or seen only by the Committee, the Committee would be willing to accede to your request and resolve into confidential session. However, I must warn you that Parliament has the right to override the decision of the Committee not to publish evidence taken in camera and may decide to make that evidence public. I might add that it has not done so as yet.

**The Hon. J. R. JOHNSON:** Professor Beard, you are appearing not as a departmental officer but as an individual.

**Prof. BEARD:** I actually asked Annie how I had been subpoenaed, because I was not sure. I am happy to give evidence as a representative of the department. However, obviously, my own views may be different from those of the department, and therefore it is probably easier if I give evidence as an individual.

**CHAIRMAN:** Some of the questions related to the department, so perhaps it would be advisable to have your evidence as a representative of the department.

**Prof. BEARD:** I am happy to do that.

**CHAIRMAN:** Do you have any comments that you would like to make by way of an opening statement?

**Prof. BEARD:** No, I do not have an opening statement. However, I thought I could give the Committee some of my background, which might be helpful in framing what questions you would like to ask me. I am a medical practitioner with post-graduate training in public health, including toxicology and specialist qualifications in public health medicine. I am

also currently studying for a PhD with the University of Sydney on the effect of high combined pesticide exposure on a group of agricultural workers.

Other projects that I have been involved include the investigation of a cluster of birth defects in Coffs Harbour and a smaller investigation, involving 15 children with diverse clinical systems which were thought by their parents possibly to be related to pesticides; two air monitoring surveys looking at pesticides in ambient air in Coffs Harbour; and a small study looking at the drift of Roundup after aerial application by helicopter.

I have worked on DIPMAC, the Cattle Tick Dip Site Management Committee, and I was involved in setting the soil criteria for DDT. I have also just completed a study on DDT and its relationship with bone mineral density. My PhD, as I said, is a study of a large group of workers, over 50 years, looking at their health outcomes in terms of cancers and deaths, and also involving a literature search of all the epidemiological data relating to pesticides.

**CHAIRMAN:** Over the years chemicals that have come on the market have been considered by the agents who sell them as “Totally harmless. You can drink this.” I well recall my former Federal member actually drinking a schooner of 2,4-D up on the north coast here somewhere at a National Party conference, saying that there was nothing wrong with it.

**Prof. BEARD:** Where is he now?

**The Hon. J. R. JOHNSON:** Ex!

**CHAIRMAN:** Obviously that was being a bit game on his part. You mentioned Roundup. When Roundup, or glyphosate, came out years ago they said, “It’s totally harmless.” Now, suddenly, the instructions start to change. Have you got any comments, seeing that you have done a study on Roundup?

**Prof. BEARD:** I did not do a study on the health impacts of Roundup. In fact, that is something that I know very little about. But, in general, I would have to say I have been very surprised how little we know about the health impact of pesticides. And the more I read, the less I think we know, especially from a human health perspective. There are some quite extensive studies looking at the impact of very high doses of pesticides in rats, but the implication of those in humans is quite debatable. The other evidence is very poor.

**CHAIRMAN:** It is strange that years ago you would drench cattle with a particular drench that had a withholding period of one day. A few years later the same chemical used in the same drench would have a withholding period of seven days. I notice it is now 60 days. Obviously, this is the same chemical. It seems apparent that a lot of the chemicals that come on the market have not had enough research done on them. Whose job is that?

**Prof. BEARD:** I think that is a very good question. The problem is that, really, to get to a position where you can make a judgment, you would have to do so much research it would be impossible to get any chemical on the market, in my estimate.

**CHAIRMAN:** That is a problem that somebody mentioned, not this morning: that some of the new chemicals coming out have less effect on the environment but that it is too difficult to get those new chemicals registered, so that people keep using the older chemicals, which are a lot more dangerous.

**Prof. BEARD:** That is true. Unfortunately, from a human perspective, you cannot trial them on humans, so you fall back to testing them on rats and rabbits.

**The Hon. I. COHEN:** Professor Beard, has the Health Department recognised the condition of multiple chemical sensitivity?

**Prof. BEARD:** I don't think the department as such has a position on it. There is a lot of debate in scientific literature as to whether it exists; and, if it exists, exactly what form it takes and what it may relate to. I would say that most of the evidence is probably suggesting that there is a condition but, in terms of the exact nature of the origins and implications, that is still very much up in the air. I don't think the department would disagree with that.

**The Hon. I. COHEN:** There is quite a deal of public debate on its existence. In fact, there is quite a deal of public debate on its existence being dismissed, would you not agree?

**Prof. BEARD:** Yes. And I am not dismissing its existence, and I do not think the department would.

**The Hon. I. COHEN:** Does the department act upon complaints about say children suffering from this form of chemical sensitivity?

**Prof. BEARD:** The problem is: How do you act on something when you are not quite sure whether it exists and, if it exists, what causes it? I mean, how do you actually respond? The department, in general, does apply the precautionary principle. If there was enough evidence to suggest that there might be a problem, I think it would take whatever the appropriate action is.

**The Hon. I. COHEN:** If a parent came by the department with a claim of chemical injury, what action would the department take? Is there a set agenda or program?

**Prof. BEARD:** No, there is no set protocol for response. I think we would look at the history that was given in respect of the child, and look at whether there is a history of possible exposures that could relate to that. If there were some that appeared to be inappropriate, we would take action in terms of responding to those. So, for example, in a hypothetical setting, if a child was playing in a playground every day and that playground was sprayed with pesticides every day that the child was there, we would probably take some action to recommend that something be done. But we would not necessarily accept that it was the pesticides that were causing the problem. We would just be applying the precautionary principle.

**The Hon. I. COHEN:** In Coffs Harbour schools I understand that contiguous to the school grounds of one particular school – and I do not know the name of it offhand – a banana farm was developed.

**CHAIRMAN:** On three sides of the school grounds.

**The Hon. I. COHEN:** Yes, on three sides. What position would the Health Department take in those circumstances? Are you doing any monitoring or any studies of a situation like that?

**Prof. BEARD:** My area of jurisdiction ends at Grafton, so I no longer make the decisions for Coffs Harbour.

**The Hon. I. COHEN:** Are you aware of what I am talking about?

**Prof. BEARD:** No, I am not specifically aware of the school that you are talking about. However, I think the real issue there is a planning one. We would certainly, in the first place, be arguing very strongly with local government that it needs to be making appropriate planning decisions.

**The Hon. J. R. JOHNSON:** When you say "We", do you mean we as in "the department"?

**Prof. BEARD:** Yes, meaning the department. In fact, whether I speak for the department or the Northern Rivers Area Health Service, there is a distinction. The Northern Rivers Area Health Service has a board, and I am accountable to that board. I am also, though, appointed as a medical officer of health with links to the department. Most responses on environmental health issues are done locally by area health services. So, when I say "we", I am talking about the area health service. However, we would do that in discussion with the department. So, when I say "we", it is probably quite important that I make that distinction.

**The Hon. I. COHEN:** Am I hearing that you were not in any way involved with an air monitoring program that occurred in Coffs Harbour?

**Prof. BEARD:** Yes, I was.

**The Hon. I. COHEN:** You were involved with that?

**Prof. BEARD:** Yes.

**The Hon. I. COHEN:** So you are aware of that situation.

**Prof. BEARD:** It was not in response to that particular issue that you were discussing.

**The Hon. I. COHEN:** I see.

**Prof. BEARD:** It was more in relation to the broad question.

**The Hon. I. COHEN:** The air monitoring in Coffs Harbour was for propiconazole, was it?

**Prof. BEARD:** Yes, Tilt.

**The Hon. I. COHEN:** The monitoring was undertaken for that chemical, however it did not monitor for surfactants and solvents. Have surfactants and solvents been proven to

be of significant impact, particularly in relation to spray drift, where the surfactants and solvents can be very mobile, as I understand it?

**Prof. BEARD:** The study was not specifically for Tilt; it was for all pesticides, and it was only looking for the active ingredients of those substances. We did it in two parts: one was looking at the volatile component in air, and another looking at the aerosol particulate, which would be more likely from spray drift. We only looked at the active ingredient.

The problem with looking for the other ingredients is that they are extremely common in use in industry and in general. In fact, if you look at propiconazole, the proprietary formulation, when I went through it the other ingredients were so common that, first of all, it would have been very difficult to test for because I did not know the sampling protocol; but, even if I had, it would have been impossible for us to distinguish whether it was coming from the pesticide, or from a car, or from an industry. It is so widespread in the environment.

**The Hon. I. COHEN:** Are you saying that such a study was of little consequence?

**Prof. BEARD:** No, not at all. In fact, I thought it was of quite some significance. It identified two pesticides in common use detectable in ambient air between 5 and 15 per cent of the time, one being heptachlor and other being chlorpyrifos. Both of those were used generally domestically. In fact, we found a significant association between their use and application by domestic pesticide, termite sprayers. And, when we detected it in outdoor air, we actually thought that that was quite significant; that, generally, people would be exposed to something that they may have had nothing to do with. But, from our study, we could not find any agricultural link, although some of the chlorpyrifos that we detected may also have come from banana use.

**The Hon. I. COHEN:** I understand that birth defects peaked in about 1984 in the Coffs Harbour area.

**Prof. BEARD:** Yes.

**The Hon. I. COHEN:** Obviously, that was a major problem. I understand also that the product Tilt had xylene in it at that time. Has there been any subsequent investigation or action against the chemical companies involved in the manufacture and distribution of that product, which was changed at about that time?

**Prof. BEARD:** I am not aware of any action with respect to the companies, but the cluster of birth defects was investigated several times, looking at possible associations – some with pesticides and some with things like arboviral disease. We ourselves undertook what is called a case control study in the early 1990s, looking at parents of children with birth defects and those without them and asking them for their history of exposure. The trouble with doing those sorts of studies is that it is very rarely that you have enough numbers for them to be able to detect if there is a link; and, secondly, you are relying on people's recall, and that is not a very good estimate of exposure.

**The Hon. I. COHEN:** Perhaps not. Do you have any figures at all that correlate exposure to birth defects? Or are you saying it cannot be proved?

**Prof. BEARD:** In the different studies there was no link that could be found between the aerial application of pesticides and birth defects. In our own study, we found two significant associations with what people recalled as their exposure: one was the domestic indoor use of pesticides, in other words aerosols; and the other was marijuana smoking in the fathers. We did not take that paper further because we believed both of those reports reflected what is called “recall bias” in that the parents of children with a birth defect are more likely to report things that they worry about that they feel may have been linked, so that does not give you an accurate picture in terms of the outcome.

**The Hon. I. COHEN:** In regard to the children of Coffs Harbour and that area, has there been a measure of the chemical residues in their blood? Is there any facility that allows that, particularly in that area where this has been such a problem?

**Prof. BEARD:** No. I understand that a lot of them have done that privately. The problem with testing blood or other biological monitoring for pesticides is to know how to interpret the results. For example, if we took blood from all the people in this room, we would probably find DDT in over 50 per cent of us at detectable levels. But what does that mean in terms of health? It goes back to what I said at the very beginning: unfortunately, the evidence that we have about whether pesticides cause health problems or not is so poor that we cannot say. So there would be the same problem with those children. If we had the results back from testing of 10 or 15 children, we would not have a benchmark against which to measure them.

**The Hon. I. COHEN:** But you knew at the beginning of the assessment the number of children. You knew that that was the limit of the number of children, and that it was not a big sample. Did you inform the parents involved that you were going to investigate the matter, knowing that that was a limited sample that was available?

**Prof. BEARD:** There are two different studies that I think you are talking about. With the birth defects study, we started off with 70 cases, which would have given us the power, if we had been able to trace them. But we had a lot of trouble tracing them, so the power dropped. But, obviously, we informed all of those parents. There was another, very small study of children that had ill-defined clinical symptoms. We did that smaller study, and that was not ever going to be of epidemiological significance because of the numbers.

**The Hon. I. COHEN:** As to Munchausen syndrome, I understand, from a number of parents that I have spoken to, that there is a lack of confidence in the assessments of some medical people that there was a bad reflection on their parenting regarding what they saw as chemical effects on their children; it was assessed as being psychological and the fault of the parents. Would you care to comment on that from a Health Department point of view? Was that taken into account? Was that used very frequently in terms of chemical complaints?

**Prof. BEARD:** I have never heard that used, either as a term or as a notion. I think our view was that parents complaining were legitimately concerned about the health of their children. We, as a department – because we were a department at that time – were concerned to find out whether there was a possible cause. Unfortunately, the tools at our disposal were not good enough to say categorically either yea or nay.

**The Hon. I. COHEN:** On the issue of birth defects, I understand that there was a study of miscarriages of defects as well as terminations, yet the study was complicated in that

the people who were pregnant and had ultrasounds were sent to Sydney. So, in actual fact, we do not get a very accurate record of terminations in the locale and of problems that might have been induced by chemical exposure. Would you care to comment on that?

**Prof. BEARD:** Up until, I think, the early 1990s there was not a consistent notification system for birth defects. What you are saying is true: parents who had a birth defect identified by ultrasound or by blood test or amniocentesis might have a termination and that would not be identified as a birth defect. So you might end up with lower rates than you would expect. After 1991 there was a more comprehensive birth defects notification system in place, and again it was changed a few years later. I understand that it does now take account of those things.

In terms of the birth defects study, that would not have made a difference because we were comparing the people that we identified with birth defects against a group of controls; we were not looking at the rates of birth defects. As I understand it, now the rates of birth defects, under this better notification system, in Coffs Harbour appear to be nearer or almost the same as the State average.

**The Hon. I. COHEN:** Is that because we are dealing with a relatively chemically-free environment, or is that because there is active intervention, assessment and the potential for terminations to occur?

**Prof. BEARD:** I do not think it is either. My judgment of what happened in Coffs Harbour is that in the early 1980s there was a true cluster of cleft lip. What caused that, nobody knows. It is possible that it could be related to pesticides; it is possible that it could be related to a number of other things. We will never know, because it is impossible to determine. That raised a lot of awareness about the issue of birth defects in Coffs Harbour, and probably the level of notification increased because people were more aware of it. So we had an artificial increase over a period of years across a whole range of birth defects.

Then, when the notification system became standardised across New South Wales, that effect was withdrawn, and we came down to a level that was the same as for the rest of the State. In that time the propiconazole, the chemical that was introduced at the same time as the original cluster – which is something worthy of note – has continued in use. The only changes that I can see are: one, I believe the reservoirs of Coffs Harbour were uncovered in that early period, and they have now been covered; and, two, there may have been a change in the formulation, as you mentioned before.

**CHAIRMAN:** You mentioned that, during the monitoring process in Coffs Harbour, two of the chemicals that turned up were heptachlor and chlorpyrifos. Do you have any comment on how those pesticide applicators should operate in residential situations? In other words, should they put out signs and give other forms of notification to neighbours in a residential area?

**Prof. BEARD:** The other issue is that it is not only to neighbours but to people who will then live inside the house for the next six months, because the levels inside are probably ten times the levels that we are detecting outside, if you look at overseas studies.

**CHAIRMAN:** You may want to take that question on notice.



**Prof. BEARD:** No, that is fine. Having said that it was detectable, when we compared that against the standard of international health criteria, even the maximum levels that we detected would not be levels that would cause health effects, using the available evidence. You then come down to the more philosophical or moral question of whether people should be informed if it is being used next to them. No, I would not care to comment on that.

**The Hon. J. R. JOHNSON:** Professor Beard, you indicated that you were monitoring a large group of workers. Was that through Occupational Health and Safety, employer or trade union involvement?

**Prof. BEARD:** It stemmed out of the DIPMAC Committee. It is basically looking at the health outcomes of the staff of the Department of Agriculture involved in cattle tick dipping operations. That has been in co-operation of the Department of Agriculture and also the Public Service Association, which represented the staff.

**The Hon. J. R. JOHNSON:** I think the courts decided something on that during the week.

**Prof. BEARD:** I don't know about this week, but they certainly decided a couple of months ago, yes.

**The Hon. J. R. JOHNSON:** I thought I read it in yesterday's *Northern Star*. Do you know of any of the trade unions that are involved in monitoring, or that have raised issues regarding staff being monitored?

**Prof. BEARD:** Certainly the Public Service Association is one of the groups that raised the issue of whether this cohort of workers we are looking at should be monitored. Monitoring the workforce has multiple problems. First of all, you need numbers. You need enough people working in a field to make it a worthwhile monitoring for research purposes. And, if you are monitoring for occupational health and safety surveillance, you come up against the benchmark problem that you don't know what the results mean. The focus, because of that, has been on trying to minimise exposure, rather than trying to rely on monitoring to give an indication. But there are monitoring programs, as I am sure you are aware, for organophosphates that are periodically being done by different occupational health and safety agencies.

**The Hon. J. R. JOHNSON:** Of recent times, in the western part of the State in cotton areas, the Committee has heard all sorts of evidence and all sorts of claims. What astonishes is that there is no reporting mechanism on the health of the citizenry as well as the workers. Perhaps it is too hard, or it can't be done, or there is no past history to go on. A newspaper clipping was presented to the Committee indicating that a chemist of longstanding in an area under cotton had noted that sales or the rate of use of puffers for asthmatics had gone sky-high. Can you see any worth, in an area that is not now under cotton but is going to be under cotton, in surveys being done now, in say Condobolin – where it is projected that cotton will be grown – prior to the cotton being grown, prior to the spraying (aerial and ground) and that that the position be monitored over a period, and you have some results pre-cotton, pre-pesticides versus post-pesticides? Would such surveys have any merit?

**Prof. BEARD:** There are a number of problems. The first one would be ethical, in that you would be using humans essentially for research. I mean, I think if we believe there is a problem with chemicals, we should not be using them, rather than conducting research on humans.

The second problem is: What do we measure? Over a short period of time, the symptoms can be so subjective. If people are aware that a chemical is being introduced into their environment, they may believe that they have got more of those symptoms, and so it would be difficult to measure. If you could identify some hard outcomes. For example, for asthma, you might be able to do peak flows; so that you can measure people's lung function, rather than people reporting that they had more test problems.

There might be some use in doing that. But properly conducted epidemiological research in places where chemicals are already in use could also be of benefit, without some of the ethical problems. One of the problems with doing that is the lack of information. You have already highlighted the fact that for some health conditions we do not have trend data, or we do not have ongoing data as to whether there are more or less of them. We do have that for some things, but some of the more subtle health effects are not available.

The one thing that we do not have, though, and the thing that is almost always difficult to identify, is exposure. Coming back to your question about occupational health, it is one thing to want to do a study into workers, but it is another thing to do it if you do not have any exposure history. For example, the speakers before me referred to pesticides and said that if there was a register of people who used pesticides and what chemicals they used, it would then be relatively easy to do long-term follow-ups of their health, and similarly with people working in specific occupational trades that might use pesticides.

I think those, probably in the short term, give more likelihood of finding something, because many of the outcomes that we are looking at might have a lag period of 10 or 20 years between exposure and outcome.

**The Hon. J. R. JOHNSON:** In your opening statement you indicated a rather impressive array of projects that you have been interested in. Are there any other projects relating to health on which you have concluded your research?

**Prof. BEARD:** In relation to pesticides?

**The Hon. J. R. JOHNSON:** Yes.

**Prof. BEARD:** No.

**The Hon. J. R. JOHNSON:** Are there any that are ongoing?

**Prof. BEARD:** The study of cattle tick dipping staff is an ongoing study.

**The Hon. J. R. JOHNSON:** Are there other industries in your area that cause you concern because of the use of various chemicals and/or pesticides?

**Prof. BEARD:** Industries other than the banana industry?

**The Hon. J. R. JOHNSON:** Yes.

**Prof. BEARD:** I think the focus here has been on the banana industry because of aerial application of pesticides, whereas in fact a lot of pesticides are used in a whole range of agricultural industries where that use is not so obvious. Depending on their volatility, the possible exposure of the community actually may be greater than it is from aerial application. So, yes, there is a broad range up here on the north coast because we have such rapid growth. We have also a growing macadamia industry, and often urban growth and agricultural growth collide at an interface. I get quite a few people contacting me for advice about that.

**The Hon. J. R. JOHNSON:** The avocado industry and the sugar cane industry?

**Prof. BEARD:** I am not with the Department of Agriculture and I am not quite sure how chemicals are used, but there do not seem to be as many complaints or issues raised around sugar cane. Avocados, to my knowledge, are generally grown in conjunction with other crops.

**The Hon. I. COHEN:** You mentioned your research on dip sites. What biological monitoring has been carried out of dip site residents over say the past five years?

**Prof. BEARD:** Probably none over the past five years, but in the early 1990s, as I am sure you are aware, there were about 40 residents who were identified as being adjacent to old cattle tick tips, and all of those were offered biological monitoring.

**The Hon. I. COHEN:** Do you have any data on that?

**Prof. BEARD:** Yes. It is a long time now, and off the top of my head ---

**The Hon. I. COHEN:** You might take that question on notice and provide the Committee with some written data.

**Prof. BEARD:** Yes.

**The Hon. I. COHEN:** What government legislation or policy measures can you suggest that may reduce the impact of pesticides on persons, property or the environment? Do you have any suggestions for the Committee?

**Prof. BEARD:** Yes. As I said before, it would be useful to have better records of who is using pesticides. I also think that significant users of pesticides probably should be required to have undergone some form of training before they use those pesticides. I think the whole question of buffer zones is one that should be explored more, but I do not think a lot is known about them. A lot of volatile substances can drift for a long way. There is also the question: Is a buffer zone just distance, or can you use, for example, a small treed area? I have heard some people say, especially with aerosol particles, that the leaves can trap the particles and prevent the drift. I think that would be worthy of some more research and then an appropriate response.

**CHAIRMAN:** Would you take on notice the question asked by the Hon. Ian Cohen. I have a number of questions that I would like you to take on notice, some of which you have answered at least in some way. We will send you a copy of the transcript, and when you

receive it would you check that you missed anything in your evidence that you would like to deal more fully with, and then send that written response to the Committee. You might take on notice that in the Orange and Wellington areas the Department of Health, or whatever it was called at the time, used to have a monitoring process of the apple growers and vegetable growers.

**Prof. BEARD:** WorkCover.

**CHAIRMAN:** Do you do that?

**Prof. BEARD:** No. It used to be, I think, the Occupational Health Division of the Department of Health and it has been transferred to WorkCover, and I do not think that program is ongoing. I am not sure. I am afraid I do not think I will be able to answer that, even on notice.

**CHAIRMAN:** Thank you very much for coming along and giving the Committee your time. The questions on notice are:

1. *Can you outline your organisation's experiences with respect to the impacts of pesticide odour on human health?*
2. *What are the major health concerns for rural communities associated with pesticide application in your area?*
3. *Are rural communities that are subjected to large-scale agricultural pesticide application statistically more susceptible to health problems?*
4. *What approaches have been taken by health departments in other States or overseas to protect the health of the community from pesticides?*
5. *How does your organisation go about liaising with local government and the New South Wales Environment Protection Authority with respect to pesticide-related health issues in the area?*
6. *What type of information does the Health Department provide to the National Registration Authority, and vice versa?*

(The witness withdrew)

(The Committee adjourned)