

**REPORT OF PROCEEDINGS BEFORE**

**STANDING COMMITTEE ON STATE DEVELOPMENT**

**INQUIRY INTO ASPECTS OF AGRICULTURE IN NEW SOUTH  
WALES**

---

**Public forum at Wests Diggers Club Tamworth on Wednesday 5 September  
2007 at 5.00 p.m.**

---

**PRESENT**

The Hon. A. Catanzariti (Chair)

Reverend the Hon. F. J. Nile

The Hon. M. J. Pavey

The Hon. C. M. Robertson

The Hon. M. S. Veitch

**ALSO PRESENT:**

Mr Bede Burke and Ms Judi Earl.

**CHAIR:** Ladies and gentlemen, thank you for attending this public forum of the Standing Committee on State Development's inquiry into aspects of agriculture in New South Wales. The inquiry will examine the contribution of agriculture to the New South Wales economy, impediments to sustaining appropriate levels of productive capacity and growth and initiatives to address those impediments.

This public forum is intended to allow members of the community to raise issues of interest to them. If you have not registered to speak but would like to, please see one of the staff members and they will add your name to the list. When speaking please keep your comments brief and to the point, to give everyone a chance to speak. Committee members may ask questions to follow up your points. Before the forum commences I will make some comments about the aspects of the hearing.

Committee hearings are not intended to provide a forum for people to make adverse reflections about others. The protection afforded to Committee witnesses under parliamentary privilege should not be abused during the forum. Therefore, I request that witnesses avoid the mention of other individuals unless it is absolutely essential to address the terms of reference. Finally, everyone please turn off mobile phones for the duration of the forum. Do not turn mobile phones to silent, as they still interfere with Hansard's recording of the proceedings.

The Committee has previously resolved to authorise the media to broadcast sound and video excerpts of its public proceedings. Copies of the guidelines governing the broadcasting of proceedings are available from the table by the door. In accordance with the guidelines a member of the Committee and witnesses may be filmed or recorded. However, people in the public gallery should not be the primary focus of any filming or photographs. In reporting the proceedings of this Committee, the media must take responsibility for what they publish or what interpretation is placed on anything that is said before the Committee. The first speaker to address the Committee this evening is Mr Bede Burke, an egg farmer.

**Mr BURKE:** I appreciate this opportunity to make a short presentation to honourable members. I come from a mixed farm, 20 kilometres west of Tamworth. One of our major enterprises is caged production of eggs. Our industry has come under a lot of scrutiny, a lot of procrastination, from all sources of industry and the decision makers. Unfortunately, it left us somewhat bewildered as to where we were going. I will try to keep my presentation to point form and will distribute a copy to you all.

In 2000, the Agricultural Resource Management Council of Australia and New Zealand [ARMCANZ] group of representatives moved in conjunction with industry and the welfare lobby groups to move to more welfare friendly cages for our birds. The key stakeholders at that time were the State and Federal Ministers of agriculture. Tragically, seven years later, only one of those still holds that portfolio. We are talking about the problem of people making decisions in 2000 to move to new cages by 2008. Unfortunately, at midnight in 2007 only one person who was at that meeting at that time still sits in that portfolio.

The other key stakeholders who participated in the ARMCANZ decision were the welfare groups, the liberationists, and industry. The changes were to be brought into effect by 1 January 2008. The key component that industry grabbed onto, and we never ever had this before, was 20 years of life to produce from that asset from the date of

installation that was key to us. Less key, but also essential and underlying, was to make non-compliant cages illegal. Again, underlying that further but probably less important was what punitive measures were to be put into legislation to address people who still produced eggs out of non-compliant cages?

Progress to date is that Queensland, the Australian Capital Territory, Tasmania, the Northern Territory—and I hope I am quoting this correctly—have legislation in place. Victoria has legislation in place, though in a much softer form, and it does not contain all the key components. Currently with the equine influenza outbreak all resources are put to that and will probably further delay the release of the draft legislation. Personally, I have a development application approved for a 120,000 bird farm and am hoping to order new cages. I need to have that order in by 1 November 2007. There is no way I can continue with my order until I am absolutely guaranteed that I will get 20 years of life from the date of installation, and spending that money.

**The Hon. CHRISTINE ROBERTSON:** Is that 20 years confirmed for that law to be in place on those cages?

**Mr BURKE:** No. Our understanding is that from the date of installation we comply with the code at that time. The code says not only that the cage needs to comply with those welfare conditions and also that cages can exist. To put it another way, in parts of Europe the cages are banned as a form of production.

**The Hon. CHRISTINE ROBERTSON:** You want it confirmed that for 20 years those cages will be legally appropriate?

**Mr BURKE:** Yes. After 20 years we accept that we may need to move to that, if something is scientifically proven to be more beneficial for the welfare of the hen. We accept that we need to move to that, but 20 years gives us time to recoup the capital cost and at the same time to make some profit out of the venture. What have our elected representatives delivered for us? I am less specific here. In 1989 we experienced complete deregulation of production and marketing in New South Wales. That was closely followed by all States. Industry was paid \$15 per bird compensation for each quota licence that we held. We had already paid some of those, and in some cases all of those, leading up to 1989.

The State Government acquired all the statutory assets that our levies had gone to building. That \$15 gave us some funds to purchase back some of those steps we saw appropriate for the industry to use, to continue. That made producing eggs at a non-market location at a competitive disadvantage. Consequently in 1989 Tamworth had a million birds in laying cages or in non-cage systems. That equated to about 20 per cent of the State's egg production. Currently Tamworth has 400,000 birds, equating to about 8 per cent of the State's egg production. Post-2008 I expect Tamworth will have between 100,000 and 250,000 birds and be less than 4 per cent of the State's production.

I point out that there has been a lot of media commentary about the cost of the new cages. We held that debate in 2000, 2001 and 2002. We have moved on from that: We accept that that is the new face of our industry. In 2008, the tragedy is that we now have national cage legislation that is non-uniform and in New South Wales it is still pending. By "non-uniform" I mean, for example, that Victoria does not have the 20-year component.

I move on to environmental impact requirements; again, non-uniform between our States. New South Wales, for less than 240,000 birds, requires only a statement of environmental effects to get a development approval for a farm. More than 250,000 birds requires an environmental impact statement. For example of how that is non-uniform, Victoria has a much higher threshold. An SEE is much less than an EIS in terms of compliance, reporting and further ongoing costs.

**The Hon. MELINDA PAVEY:** Do you know what the figure is in Victoria?

**Mr BURKE:** I know there is a farm at Lethbridge with 370,000 birds that did not require an EIS. I cannot be more specific, I am sorry. Thanks to our democratic system we have no GST on food products that require no further processing. That is quite crude, but the outcomes delivered to us in the egg industry are that we pay GST on all our inputs and we do not receive GST revenue on our eggs. We are one of the few industries that GST impacted on in a way that it was not meant to. We were meant to be cash positive in our business.

My business turns over \$1.2 million worth of eggs. We require around about another \$10,000 for one month, if we do our BAS statement every month; if we do it quarterly, \$30,000; and if we only do it annually, multiply it out and we come to about \$120,000. The compliance in our business and the way in which we operate has put an extra burden on our business when we felt we should have been beneficiaries. It was meant to be better.

I will just speak more broadly before I finish. Tamworth used to have a cage manufacturing industry, a plant. We now have to import our cages—and this is why it is very important for me and others who are yet to adopt the new cages—from Europe, China or America. For the new cages that I tend to install it is more cost effective for me to bring out eight people from Malaysia to install those cages for an eight-week period than I can employ local labour, with my on-costs for that labour.

The lock up of the Brigalow has meant that I am now unable to procure softwood shavings for our deep litter setups. As you are probably aware, Tamworth is one of the largest chicken meat industry production facilities in Australia and our only options for litter for each new batch that goes in is softwood, hardwood, rice hulls and I do not know what the others are. It has taken away one of those of very important ingredient sources.

Another concern is that the type of shedding that we are all moving to in the intensive industries is environmentally controlled and our dependence and reliance on a stable and always available and electricity supply is absolutely paramount. I have grave concerns that our power grid is not now coping with base load and I am not sure that our power grid will be able to fulfil our requirements and needs and security of power into the future. We will always put in backup power but that is only a standby blackout or trauma situation. It is not there for the medium to long term.

Stamp duty is another issue that we have. Stamp duty on things like the fire services levy and insurance premiums really concerns me. A great feature of what we have done as a government is given an exclusion for intergenerational transfer and the payment of stamp duty in the case of primary production. That has been a great win.

**The Hon. MELINDA PAVEY:** Wal Murray did that.

**Mr BURKE:** When I prepared this, I put in water infrastructure as being of great concern. We all read in the paper on Tuesday morning, I think, about the upgrade of Chaffey, and that is most welcome and appreciated. Indirect labour costs concern me and my industry very much; workers compensation and leave loading are the two that really gripe me. Others are occupational health and safety and the responsibility of employee behaviour falling back to the employer, litigation, registration and roadworthiness of a farm vehicles, lack of student study in agriculture, lack of investment in country and regional infrastructure and the cost of investments.

It always seems to me that when our national bodies and our elected bodies spend money to do something, it always comes in overbudget, it rarely comes in on time and it seems not to be able to compete in a lot of ways with what we, with the limited capital base, have to do in private enterprise. I think that this consultation of this Committee is commended and I thank you for this opportunity.

**The Hon. MELINDA PAVEY:** What sort of investment are you waiting on making with the legislation that you need to go through the State Parliament?

**Mr BURKE:** My first shed will be a retrofit, which is a cheaper way of doing it, and for 50,000 birds that will cost about \$28 to \$30 a bird, so about \$1.2 million to \$1.3 million. We have two sheds to do. The tragedy is that because I am retrofitting sheds, I have to pull out cages that are not yet non-compliant. I have a double dilemma. If I was building a new shed adjacent, I could progress with that and move on but when I have to pull down something that I do not know is going to become illegal, it is a double dilemma. I have the two 50,000-bird sheds, which is about \$2.4 million. That is a big investment for our family and in November-December last year we purchased a farm that had approval for four 40,000-bird sheds that was 20 kilometres away.

As a family we were concerned that that might be lost if it went to a non-egg industry person, and knowing how difficult it is to get development applications through and the cost of them—and this particular farm was well down the way with all the pads formed for the new sheds—we thought that might have been another way for us to go, to start the new shedding there, but again without the new legislation in place we had to put that on hold.

**The Hon. MELINDA PAVEY:** How many others within the industry are acting in the same way? Is everyone waiting on the legislation?

**Mr BURKE:** Approximately 70 per cent of the industry are in new cages. A lot of the bigger people had to move on; they could not wait. Three or four of the biggest producers have about 60 per cent of the birds, but that is the way the industry is and deregulation moved us into that—critical mass and a lot of people with outside investment coming in. There is not a lot of family farmers left but there are some good ones. There are quite a lot on the outskirts of Sydney and there is another chap in Port Macquarie who is waiting for the legislation as well. I spoke to him only two days ago. They currently run a lot of those birds in Tamworth under contract. Even though they will put their new cages at the coast, they will still pull feed and other resources out of a place like Tamworth.

**The Hon. CHRISTINE ROBERTSON:** Is there a concern that the legislation will be different to the growers' current expectation? Has there been a lot of consultation with the farmers during the process for the draft legislation? What exactly is the concern? Are you worried that it will be changed in Parliament?

**Mr BURKE:** No. We are worried that it will not contain those key components I mentioned earlier, in particular, the guarantee of the 20 years of life of producing from that asset.

**The Hon. CHRISTINE ROBERTSON:** Before you make the investment you want to know that it will go on for 20 years?

**Mr BURKE:** Yes. In Tamworth the week before AgQuip there was a protest that was not allowed by vegan groups who lock themselves in cages and go around the country. That prompted me to write a letter to the Minister saying that it is even more imperative that we have this legislation when my bankers and other people are seeing this activity. It is their right to do that, I have no problem with that. What I have a problem with is them stopping me producing from something that we spend a lot of money on in complying with legislation hopefully that will back it and not be able to have the 20 years to continue to produce.

**Reverend the Hon. FRED NILE:** What was the Minister's response?

**Mr BURKE:** I have not received a response yet.

**Reverend the Hon. FRED NILE:** Do you have an egg growers association?

**Mr BURKE:** Yes, and New South Wales Farmers.

**Reverend the Hon. FRED NILE:** Have they had a meeting with you?

**Mr BURKE:** Yes.

**Reverend the Hon. FRED NILE:** They should be able to give you some timetable as to when the legislation will be drafted.

**Mr BURKE:** Yes, his timetable was the rising of the spring session last year and we are still waiting. I say that with total respect; that was our response from him. We backed off as an industry but we have an expectation. The draft is very close at the moment. I believe it was going to be released either last week or this week but with the resources that the DPI has had to pull in to respond to the environmental impacts, I do not believe there is any staff free to help answer any query he may have in terms of responding because there will be producer groups that will not be happy with the legislation.

**Reverend the Hon. FRED NILE:** You have not seen a draft, not even a preliminary one?

**Mr BURKE:** No, I have not. I am a member of the egg committee of the New South Wales Farmers Association and I know that our chairman participated in putting

recommendations to the Minister prior to drafting. We have a clue but in terms of seeing those key components we have not seen anything yet.

**CHAIR:** So at the moment you are none the wiser since last year, is that right?

**Mr BURKE:** That is right.

**CHAIR:** Your last consultation with the Minister, through New South Wales Farmers, was when?

**Mr BURKE:** We had our AGM at the farmers' conference last month. From that I believe that a delegation met with the Minister and we believed that it was imminent but we keep waiting.

**CHAIR:** And you need to know by when?

**Mr BURKE:** We have a time line. What is driving it is that the birds I have in the shed that I need to pull down will reach their end of lay shortly and I need to order well back, with lead times, to get that equipment manufactured overseas, freighted out here and through customs.

**CHAIR:** You said you need to know by 1 November, is that right?

**Mr BURKE:** No, that is when I need to order. We just keep waiting and we are told that the legislation will be put in place but it has stymied our business. The others and I put our small amount of capital at risk and we are waiting. The bigger producers had to move on; they could not wait. They have been progressing with it since 2000.

**The Hon. MELINDA PAVEY:** You mentioned that the Victorian legislation differed in the 20-year investment. How different is it to what you are hoping the New South Wales legislation will be?

**Mr BURKE:** They do not keep any tenure in terms of allowing you to produce out of the system for 20 years but they also have slightly softer lead-in time to going to the bigger bird space, the bigger floor area as well. They are allowed to continue at 450 square centimetres per bird until something like 2012. They have lead-ins. I think Victoria was waiting to see what the New South Wales legislation would be and did not want to put their producers at a disadvantage.

**The Hon. CHRISTINE ROBERTSON:** We need to go back to the Minister on this issue rather than it being a matter for this inquiry. However, in relation to the prospect of the new legislation, about which you have had communication and participation, in the long run if you get your 20 years, will this create more innovation and continuance of the poultry industry or will the new legislation cause an obstruction to the poultry industry?

**Mr BURKE:** To Tamworth there is going to be a significant natural attrition.

**The Hon. CHRISTINE ROBERTSON:** Because they cannot afford the implementation of the caging?

**Mr BURKE:** Yes, and because demographically their children have not come through the farms, through the business, and have gone into other careers. I think a lot of the people within the industry have decided that they are quite comfortable now to retire out of the industry but they still need that legislation to retire out because of the lead time with ordering birds, they need to wind down. We believe that the Minister will put in place a lead-in time for birds that are already in the incubator or on the ground to go into non-compliant cages and I think the industry is comfortable with that, but these people still need to know and instead of having to wind down by 1 January 2008, it will probably be 1 January 2009.

I credit the Minister with the lot of ability. Unfortunately the industry has only got 80 per cent of new cages in place. We currently have 12 million birds and, say, there are about nine or 10 million in new cages, the industry would not have been able to cope if we had had it mandatory by 1 January 2008. Had the legislation been in place four years ago, yes, we would have, but now it is so late, people like me have held off and now we need to have a transition period. Yes, we will see a decline in Tamworth but without legislation we will see no new cages in Tamworth.

**Reverend the Hon. FRED NILE:** You want a 20-year guarantee, but in fact the Government can only give a guarantee for its term of office. This is legislation, so it can be amended by a new government or even by the existing Government. I understand why you want the guarantee, but I am concerned as to how much confidence you could have that a 20-year guarantee is set in concrete and will not be changed in the future.

**Mr BURKE:** I guess that is always a difficulty. How do we come to terms with that? At least the decision for the investment was right at the time, and we can deal with those issues later. Queensland, Tasmania and the Northern Territory have that guarantee. However, the Australian Capital Territory does not, and that is the reason for the activity there.

**Reverend the Hon. FRED NILE:** If there was a 20-year guarantee and conditions were not fulfilled there could be provision for compensation in the legislation.

**Mr BURKE:** I do not know whether there would be any compensation, but I guess there would be legal ramifications anyway.

**The Hon. MELINDA PAVEY:** Yours is a family farm. Could you give an outline of your farm, the number of people you employ and the different practices you have on your farm, just as an example of an innovative family farm operation—from the perspective of the Committee looking at the future success of farming through New South Wales?

**Mr BURKE:** We run poultry at a site that we own on our farm. There are 30,000 birds there. We also lease another farm of 12,000. The reason we do that is that three flocks makes a lot of sense. We rear replacement birds for those. We buy 25,000 day-old chickens about every 22 to 24 weeks. We keep 15,000 of those 25,000 each time, and we market the balance, usually 6,000 to 8,000, to one customer.



We have a feed mill on the farm, and it uses most of the grain that we grow on the farm. Currently, we have 2,000 acres of winter crop in, and 700 acres of summer crop going in. We mix about 3,500 tonnes of feed a year, and we sell some of that to one customer, the same fellow that we sell the birds to.

We run some 90 breeding cows for meat purposes, and we run 650 first-cross ewes for fat lamb, prime lamb production and secondary wool production. We are a small family farm. We employ 4 to 5 permanent staff, and we employ about another 14 casual staff. When we move chickens we can employ up to 16 staff, and that will occur on a much more regular basis if we put more birds in. We host a lot of students and people who are learning agriculture or are wanting placements because we have such an integrated and diverse farm. It is owned by my wife and I.

**CHAIR:** Mr Burke, would you mind if we made public the document that you have given to us?

**Mr BURKE:** No. But there is one name in it that I left out because you said in your introduction not to refer to anyone. If you would black that out, that will be fine.

**CHAIR:** As far as your immediate problem is concerned, we will undertake to talk to the Minister. That matter has nothing to do with these terms of reference, but we undertake to talk to the Minister on your behalf. I thank you and your wife for coming in tonight.

**Mr BURKE:** Thank you very much, and thank you for the opportunity to speak.

**(Mr Burke withdrew)**

**CHAIR:** Ms Judi Earl, Managing Director, Holistic Management Australia, will now make her presentation.

**Ms EARL:** Thank you, Mr Chairman, for the opportunity to speak with you today. I would like to give a little of my background. I am a consultant in natural resources and agriculture, based in Guyra. Another fellow and I run that business, and in December last year established Holistic Management Australia as a not-for-profit company.

My background is in grazing management, grassland ecology, I have a PhD from the University of New England, and I am fairly passionate about agriculture and the future of agriculture. I apologise for my lack of preparedness today; I was made aware of this forum only on Monday afternoon, so it will be fairly general and my examples will relate to my own experiences.

To avoid repetition, I would like to say that I almost fully concur with Mr Bruce Gardiner's presentation this morning. Rather than go over the same territory, I will note my key exception to his presentation, and that is the concept that production and achieving environmental outcomes are mutually exclusive.

We work on-farm with graziers and manage research projects in collaboration with those graziers, monitoring the effects of changing grazing management and using a holistic approach to management. The research results that we have achieved indicate that it is possible to have significant environmental outcomes and increase productivity.

This morning the Committee asked a couple of questions relating to the viability of agriculture. If you do not mind, I would like to give the Committee a couple of examples of what we have achieved in the past few years. The first is a land, water and wool research project, a national project. We were contracted to manage one of the sites in South Australia, at Clare, a 555-millimetre rainfall zone.

The results over an average five-year period were with planned grazing, using a holistic approach to grazing management, compared to a conventional grazing site. There was a 46 per cent increase in annual stocking rates; a 30 per cent increase in annual herbage mass, so annual pasture production; and a 72 per cent increase in perennial grass cover.

In the first two years there was a 16-fold increase in water infiltration rates. After 4 years, that increased to a 38-fold increase in water infiltration rates, using a different approach to managing grazing animals. Ground cover never fell below 95 per cent in the plan grazed site, whereas over five years in conventional grazing the average was 60 per cent; so there was 40 per cent of bare ground.

I would like to make the point that 70 per cent ground cover is the accepted norm, and basically the target level of ground cover. I do not know any other industry that would accept 70 per cent production as the goal. Basically, 70 per cent ground cover means that 30 per cent of the grazier or farmer's productive capacity, of the ability to capture sunlight is lost.

As another example, at Uralla I have been monitoring property for an individual client since 2000, when he bought the property. At that site, stocking rates increased

from 6½ DSE per hectare to 13 DSE per hectare. Annual pasture productivity on that site, monitoring eight paddocks on the property, increased from an average of 3½ tonnes per hectare to more than 10 tonnes per hectare at every site.

Water use efficient—and here I am referring to kilograms of dry matter, herbage mass per hectare that is produced per millimetre of rainfall receive—has increased from an average of 4 to more than 10 kilograms of dry matter per hectare per millimetre of rain. We talk about doubling water use efficiency, it is equivalent to or better than doubling rainfall.

Between the years 2000 and 2002 there was also a 40 per cent increase in soil organic matter. Considering that, on average, half that soil organic matter is carbon, that is a fairly significant increase. Ground cover on that particular site has increased from 85 per cent, to be consistently 100 per cent each year. And soil microbial biomass has increased three-fold in the years from 2002, and we are doing some more measurements in the next few weeks.

I should point out that all of those achievements were recorded in five years of drought. So it is possible to improve productivity and achieve positive environmental outcomes. Those two examples were in the same environment. One was on the same farm, but with a different approach to management. The other was in an experimental trial. So it was the same environment, the same land, the same history, same everything—just a different approach to management.

With regard to the specific terms of reference, personally, I consider that agriculture is our future. Without agriculture we do not have things that we have as a society. As one of the more enlightened United States Presidents said, "The nation that destroys its soil destroys itself."

I am not an economist and I do not have the figures at hand, but I would suggest that our current booming economy is really being supported by the mining of our soils. The Committee heard this morning that with all the science and the benefit of best practice, loss of soil to erosion has increased by 20 per cent in just the last five years. That is according to figures presented by Mr Gardiner this morning.

Drought and flood are basically symptoms of the same problem. But of equal importance with soil loss is the loss of organic matter and carbon from our soils. I would suggest that sustaining our current level of agricultural production is nowhere near good enough. We need to start thinking about regenerating land, regenerating production and the productive capacity of our land, and regenerating rural communities and rural economies. Just this morning I heard that flight services were being removed from a couple of towns west, and that problem is ongoing. So this is not only about maintaining the viability of the land, but also about maintaining the viability of those rural communities.

I have given the Committee only two examples. There are hundreds of individuals achieving results like those across the country. To my mind, the biggest impediment to moving forward is the way that we as a society—not only farmers and graziers, but society as a whole—view agriculture. I think we need to fundamentally look at and change the way we manage our natural resources, get over our addiction to technology and start to work with natural processes, rather than continually trying to

dominate them. That, by default, reduces the cost of production. I believe that is possible with an holistic approach to management of our natural assets.

Holistic management basically considers the triple bottom line. It provides a decision-making framework to actually achieve that, rather than paying it lip service, which I think happens all too often. It forces us to consider the economic, social and environmental effects of any decisions that are made, both short-and long-term.

I believe the future of agriculture in our nation's economy is up to us as individuals and as individual land managers and those making natural resource and agricultural policy. It is our responsibility to create the future we want and to set the targets and goals to achieve that, while really focussing on things we can control as land managers and stewards of the land, rather than on those things that are out of our control. I do not believe it takes millions of dollars to fix the problems that are facing our natural resources and agriculture. I think it really comes down to a fundamental change in the way that we approach the task and our attitude. Holistic management provides the framework to create and sustain that change.

**Reverend the Hon. FRED NILE:** You made comment on what Mr Gardiner said about 70 per cent of land cover, and you made some comment about the remaining 30 per cent. I am not sure whether you were critical of what he was saying.

**Ms EARL:** No.

**Reverend the Hon. FRED NILE:** Are you saying it was not economical? How can a farmer make a profit with only 30 per cent land cover?

**Ms EARL:** Actually 70 per cent is the accepted level of groundcover that is promoted as being achievable.

**The Hon. CHRISTINE ROBERTSON:** You reckon you can get better?

**Ms EARL:** Yes, and we need to get better. We need to get better, particularly in 550 millilitre rainfall zones, with 95 per cent covered it is achievable 90 per cent of the time; in 800 millilitre rainfall zones, or 700 millilitre and better, 100 per cent of groundcover 100 per cent of the time is essential to maintain the productive potential of the soil.

**Reverend the Hon. FRED NILE:** What do they grow their crops in? If they have groundcover I took that to mean not productive?

**Ms EARL:** Dr Martin was talking about zero tills and maintaining cover in terms of organic litter. It is really about protecting the soil surface.

**The Hon. CHRISTINE ROBERTSON:** In grazing properties?

**Ms EARL:** Yes, grazing, but also in cropping. On grazing properties there is no excuse for not having 100 per cent groundcover 100 per cent of the time. In cropping, obviously you need to be disturbing the soil to actually sow the crop. It is possible through minimum tillage conservation practices to maintain maximum cover and also build organic matter in the soil.

**Reverend the Hon. FRED NILE:** With 70 per cent groundcover you can make a profit out of the remaining 30 per cent?

**Ms EARL:** Sorry, what I was referring to is if you have only 70 per cent groundcover, plant biomass, essentially if you are involved in agriculture you are harvesting sunlight energy and converting it into plant products. If you have only 70 per cent of the soil surface area covered in plant material then 30 per cent is contrary, it is desert. It is non-productive. If you have only 70 per cent of the area of your property in production that is unacceptable to me.

**CHAIR:** Thank you. Will you forward your submission to the Committee

**Ms EARL:** Yes, I will email it.

**(Ms Earl withdrew)**

**CHAIR:** The Committee had expected another gentleman to address the forum, but he has not appeared. I was hoping to receive more informal matter for the record, but that was not meant to be. I take this opportunity to thank each of you for your contributions. As there are no further contributors I will close the forum. The Committee will report to Parliament in early November and hopefully the report will be published soon after that. I thank the Committee members and Hansard and the people of Tamworth for their support.

**(The public forum concluded at 5.50 p.m.)**