A Landholder Perspective

Helen Cathles

A Director on the Yass Rural Lands Protection Board, and member of the RLPB State Council.

Cookmundoon, Wee Jasper 2582. weejasper@bigpond.com

Rural Lands Protection Boards

The Rural Lands Protection Board is an organisation representing every farmer, grazier and landholder in New South Wales whose land has a carrying capacity of 50 Dry Sheep Equivalent or more.

Our core business areas are animal health, the management of our travelling stock reserves and pest animal control. The major legislation governing RLP Boards are the *Rural Lands Protection Act 1998* and the Stock Diseases Act 1923. We have no jurisdiction over weeds. Weeds are under the authority of Local Government.

There are 48 autonomous boards, each with eight elected directors, and each has its own pest animal policy and pest management plan.

These pest management plans include a ranger to set up, coordinate and implement vertebrate pest control programs. Such programs are usually a collaborative approach by Board staff, land occupiers and sometimes Crownland managers. A vertebrate pest management plan is developed to minimise the impact of all pests within each board. Each RLP Board has its own policy on the suppression and destruction of each vertebrate pest species within its district.

Coordinating these 48 boards is the State Council. State Council's environmental policy on pest animals is to minimise the impact of pest animals on rural lands, and that, in a nutshell, is the Rural Lands Protection Board in relation to pest animals.

With our new RLP Act there have been legislative changes to pest animal control. So firstly, a comment on how the boards view those legislative changes. There is apprehension in some board districts to the changed status of the dingoes. There's apprehension that the companion dingo, unrestricted, will cause havoc, create a public nuisance and kill livestock. There's concern at the outcome if the dingo crossbreeds with an aggressive breed. There's concern that the pure dingo may become extinct. Other boards feel it's too early to determine the outcomes. All boards welcome the binding of the Crown Land tenures to comply with a pest animal order to control pest animals as a positive.

The effect of the dingo and wild dog

The best way to explain the effect of the dingo and wild dog on the farmer or grazier is to start at the actual attack because that's where it affects us most. I cannot stress enough that farmers and graziers are very conscious of their duty of care to their animals. As much as the economic rationalists might tell us otherwise, that our sheep, our cattle and our goats, are only commodities, our duty of care seems to override this.

So with this in mind, imagine a paddock somewhere in Australia, perhaps if you're lucky as beautiful as where I live at Wee Jasper, with a river running by. In this paddock you see a sheep standing on its own, a little bit weak and a bit dazed, it wanders alone. You cast your eyes down the back of the sheep and you get to the rump, suddenly you see that it's chewed out, that actually the muscle is hanging and the bone is exposed and it's quite revolting.

If you cast your eye a bit further in the paddock there is another sheep on its own just standing still, and when you get a bit closer to that one you notice that it's not the placenta extruding from the back of that sheep, it's actually the entrails.

These sights are not uncommon in a dog or dingo attack. There are usually sheep with their muzzles bleeding from repeated incisor punctures and others with bites to the rump and hocks. Mobs are often chased around and around until they drop from exhaustion, or they can be pushed into a dam. In this case, they drown as they struggle over each other looking for refuge. It's not uncommon for 60 sheep to die in such an incident. Or they can be pushed into a fence, break their necks, or pushed through that fence into a paddock where there's no water.

There are many, many ways livestock can die at the whim of a dingo or a wild dog. Food and

Pages 75 - 83 in *A Symposium on the Dingo* edited by C. R. Dickman and Daniel Lunney, 2001. Royal Zoological Society of New South Wales, Mosman NSW.

sustenance are not the only reasons for attacks and killings because, like us, dingoes and wild dogs like to play. Some just kill for the fun of it.

The next step in a dingo or wild dog attack is dealing with the carnage. You have to decide whether you're going to cut the throat of the injured animal or return home, get the gun and go back and shoot it. This could take several hours. As you saw with the slides that Peter Fleming put up, the animals are distressed and visually repulsive. It's very hard to physically touch them and deal with them. While this may appear to be an emotional perspective, death and injury to animals is always an emotive subject. This is what happens, these are the facts.

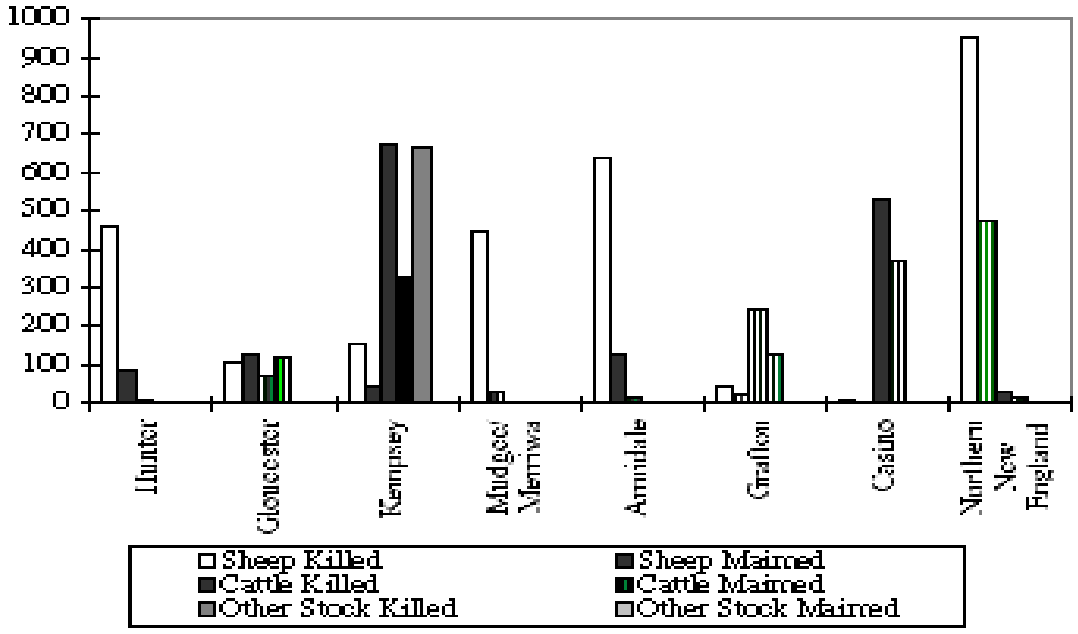
The next consideration is the losses. These include all the animal production costs. Firstly, the sheep which have been killed, there's the loss of those lives and your sheep numbers are affected. There's the lost genetics, the future progeny, the meat or wool production from the ones that were lost, the meat and wool production from the future progeny. Today the viability of a grazing enterprise is directly related to stock numbers and genetic quality.

Secondly, the maimed sheep. Should they survive - and most don't - their stunted growth results in poor meat or poor wool production. It's common for ewes to abort or mismother. The wool may be tender; and at the last wool sales, the discount on tender wool was approximately 35 per cent.

Thirdly, there's the remaining flock where the attack took place. Due to shock there is the possibility of ewes aborting or mismothering, and tender wool, once again. The following need also to be considered. Can the stock remain in this paddock? Do you need to buy fodder in and paddock them elsewhere? How will this additional cost be funded? Will movement of these stock impact on your pasture improvement program? Will this have an impact on your animal health program for internal and external parasites or impact on disease control programs? **Nothing remains the same.** There is a domino effect on your farm management.

There's the human production costs: time to dispose of the sheep, care of the maimed, which is ongoing, a dramatic increase in the time to carry out animal husbandry on the mob. On the tablelands when you attempt to muster a mob after an attack, they ricochet all over the paddock, at least doubling the management time. There's emotional stress via our duty of care. Due to stress, our time is less productive. There is a feeling of helplessness and being a victim of the conservation ideal. The weight of the conservation ideal is felt by a large number of farmers not only with dog predation.

There's the opportunity cost of what you could be doing while you're out caring for these sheep that have been affected, maimed or killed and patrolling the predation area. Immediately following an attack, there's ongoing surveillance and control management; this is essential and can take many hours out of your day, every day for a month. Other management maintenance and improvement activities are put on hold. Attacks usually continue until there is a change in the wild dog or dingo's routine or the farm circumstances.



Wild dog - stock predation figures for 1998

There's a reduction of land value due to the cost of predation. Predation is classed as an ongoing maintenance cost and therefore placed against the $ per hectare value. If the costs are too high, there is a change of enterprise, should your land permit. Options are limited, keeping in mind that most land at the interface of dingo and wild dog habitat is lighter country and suited only to grazing smaller animals, such as goats and sheep.

People become disenfranchised from their industry. This affects how people may see themselves in their own communities, and through all this there is definitely an impact on the social capital.

There is an industry cost. Dingoes and wild dog attacks have actually altered the livestock distribution Australia-wide. The South Coast RLP Board is now predominantly cattle. The Cooma and Bombala RLP Boards have seen cattle replace sheep wherever possible. In the north of the state, all along the eastern escarpment, from Scone to the Queensland border, there's been a great change in stocking type. A projection by Fleming and Saunders in 1988 put $2.9 million as an approximate loss to the sheep industry from predation.

If changes of enterprise occur, and if these changes create a sub-optimal enterprise mix for a particular agro-environment, or a sub-optimal pasture management, there is a mediocre or plain production result, and that new industry, as well as the individual producer, will also suffer.

I'd like to emphasise that the dingo and wild dog attacks affect the entire farming enterprise, their community and their industry, it is not just limited to the sheep that are killed.

Perhaps the best way to explain this impact is to liken it to a city family when there is a sudden illness in the family. A son, daughter, parent or spouse requires intensive care in hospital.

Every family member is affected. The household routine is completely rearranged and although friends generously lend a hand you meet yourself coming and going from the hospital. All non-essential activities are put on hold. Your work timetable is imposed on, important projects progress in slow motion and the financial drain is ongoing.

Within a week or two you are surrounded with chaos and absolutely exhausted just trying to do everything that is essential. At this point the scales really tip when the bills start rolling in, mail after mail. **Nothing remains the same.** The impact has extended far beyond the sick person.

In 1997 I was putting together some figures to try to quantify what landholders actually spend on feral dog management in a 12-month period I conducted a limited telephone survey in the Bega, Bombala, Braidwood, Cooma, Gundagai and Yass RLPB districts. The excel spread sheets from this survey I include for reference. *Appendix 1.* This does give an indication of how severe predation impact can be even on a small sample.

In the north of NSW the RLPBs of Armidale, Casino, Glouster, Grafton, Hunter, Kempsey, Mudgee/Merriwa and Northern New England present for your information their 1998 amalgamated stock predation figures. *Appendix 2.* These are basic figures and do not differentiate between breeding stock and dry stock. The lack of a common reporting system for stock losses inhibits a full analysis and therefore these figures are an indication only.

Control Methods

The different control methods used by RLPBs are:

- aerial baiting, when it's approved
- hand baiting, which is usually done in a group because it's far more efficient and effective
- bait stations
- trapping with soft jawed traps
- shooting
- maintaining a buffer zone - the buffer zone is particularly effective because it gives the added advantage of limiting the hybridisation of dingoes, and
- the dingo fence.

It's interesting to hear all the stories that come back about control methods and the different results. My husband was recently at a meeting between Tumbarumba and Tooma, where there has been a dramatic build up of dog numbers, and they commented that their bait stations haven't just been disturbed, they've been totally annihilated. How the problems are to be approached and solved, differ in each case, in each Board, and usually reflects past successes.

It is essential to have a pro-active management plan in place for the control of the dingo and wild dog. In the non-agricultural sector of the Conservation Community there appears to be a growing misconception that we, the farmers /graziers, are reckless in our approach to native flora and fauna. These perceptions rise into misguided hostilities and attitudes toward the agricultural sector. I would like to illustrate, by outlining the Wild Dog Project currently underway in south-eastern NSW & the ACT, that we are far from reckless.

Wild Dog Project in south-east NSW & ACT

Graziers initiated this project through the YASS RLP Board. With perseverance and persistence the South Eastern Region Steering Committee was formed in 1996 with the broad objective to improve the management of feral and noxious animals in the region through an integrated and cooperative approach.

The steering committee had representation and endorsement from the Environment ACT, ACT Lessees Association, Department of Molecular Genetics University of New South Wales, the Department of Agriculture, the Department of Land and Water Conservation, State Forests, both hardwood and softwood, the NSW National Parks and Wildlife Service, Australian Hydatid Control and Epidemiology Program, the Rural Lands Protection Boards (representing ratepayers) of Gundagai, Cooma, Braidwood, Bombala and Yass.

The outcome from the steering committee is the project for *Integrated Management of Wild Dogs/Dingoes at the interface of Crown Lands and Grazing Lands in South Eastern NSW and the ACT.* We received endorsement and additional funding via the National Heritage Trust from the Bureau of Research Science.

This was the first time all these agencies / organisations had been brought together and the first time a joint commitment for a common goal had been achieved. All participants are under no illusions. We have recognised a need for common scientific knowledge and each will use this knowledge to achieve a variety of positive outcomes vital to our individual problems.

The project covers approximately 1 million hectares including the Kosciuzsko, Nungatta, Namadgee, Nalbaugh and Brindabella National Parks, NSW State Forests, Vacant Crown Lands and private land holdings. The project aims include:

1) **assessment of effectiveness of strategies and methods to reduce the impact of wild dogs on livestock production.**

The management of wild dogs is complex and involves many agencies. This project will be the first to develop a coordinated adaptive management plan for wild dogs in a large contiguous area based on objective data.

There are no estimates of Australia-wide losses to livestock production caused by wild dogs (dingoes, dingo/domestic dog hybrids and feral dogs), but the estimated annual expenditure on control of wild dogs is second only to rabbits. These estimated costs do not include the time and expense incurred by farmers in individual control activities. Despite this significant expenditure, wild dogs continue to be a major problem for primary producers in the project area, particularly sheep graziers whose farms are adjacent to Crown Land.

Cooma RLPB stock losses are presented as an example (Table. 1). In addition, it is noted that a study by Fleming and Korn (1989) indicated that livestock losses and injuries due to wild dog attacks were under reported to RLPBs by as much as two thirds.

A total of $35,143 (combining Cooma RLPB, NSW NPWS & NSW State Govt funds) was spent on dog control in Cooma RLPB January 1 to December 31, 1996. In addition, during the same period Cooma RLPB landholders spent, or had stock losses, conservatively estimated at $101,931. In 1997, in Cooma RLP Board, 1138 sheep were killed and in 1998 sheep kills went up to 3356. As a result of those high figures a special permit to aerial bait was granted.

Table 1. Numbers of livestock killed or mauled annually by wild dogs in the Cooma RLPB 1986–96.

Year	Sheep killed	Others killed	Sheep Mauled
1986	367		
1987	1036		130
1988	884	6 goats	181
1989	1806		376
1990	973		126
1991	1146		117
1992	1303		239
1993	1399		249
1994	1036		249
1995	296		115
1996	549	1 deer/30 goats	63

To assess the effectiveness of strategies and methods to reduce the impact of wild dogs on livestock production, transects have been established. These pass through National Park, State Forests, Vacant Crown Land and private grazing land. Transects are located in consultation with local Trappers and Feral Animal Rangers and take into account accessibility in winter and summer and the history of wild dog activity.

Transect data will also determine wild dog abundance, diet through scat analysis, presence of Hydatid tapeworm coproantigens and effects of management methods on representative non target species.

A common reporting system will be developed and trialed with graziers and RLPBs.

2) assessment of the importance of wild dogs in the transmission of hydatid parasite *Echinococcosis granulosus*.

The canine tapeworm *Echinococcus granulosis* occurs commonly in wild dogs. This is the causative agent for hydatid disease in humans, livestock and wildlife. This parasite is an important zoonosis (Taylor 1993; Jenkins and Power 1996), causing great morbidity and occasional mortality in humans. Approximately one patient a week is treated for Hydatid disease in NSW and most are from rural backgrounds (Jenkins and Power 1996). Wild dogs transmit *E. granulosus*, hydatid disease, to sheep (Grainger and Jenkins 1996), and cattle (Gemmell 1959), contributing to production losses for the industry; and to wildlife, affecting the homeostasis of the infected individuals.

Wild dogs are an important definitive host for *E. granulosus* in Australia and determining the prevalence of infection in a population of wild dogs is a useful indicator as to the degree of transmission of Hydatid disease in the area. Transmission to livestock by wild dogs occurs most effectively in situations where grazing land and Crown Land meet (Grainger and Jenkins 1996). From data collected, a management plan to reduce the impact of Hydatids will be produced.

3) determination of the genetic status of dingoes/wild dogs in south-eastern Australia.

Australian dingoes *Canis familiaris dingo* are under threat from cross breeding with domestic dogs *Canis familiaris familiaris* (Corbett 1995). This is particularly evident in large areas around the more densely settled parts of south-eastern Australia. To allow the dingo to disappear due to the interference of modern society would not be ethical. With DNA testing we will be able to ensure that true dingoes and not a hybrid population is being preserved. Dr Alan Wilton is working on this facet of the project and has outlined his work earlier in this symposium.

During the project, data will be collected on:

i) wild dog abundance and distribution in the study area, wild dog damage and costs.

ii) the effectiveness of various control strategies and their impact on non target species.

iii) the diet - preferred prey species of wild dogs in the study areas.

iv) the importance of wild dogs in the transmission of hydatid disease to livestock.

v) the genetic diversity in wild dogs in south-eastern Australia.

The data collected will be used to develop an integrated strategy for wild dog management in south-eastern Australia and the ACT.

The project also has major educational objectives. To educate farmers/graziers and feral animal control officers from Environment ACT, NSW NPWS, NSW Agriculture, RLPBs and NSW State Forests, in the most efficient and cost effective methods for wild dog management at the most effective time of year for implementation of the various methods. Two trainees are now in their second and final year having completed many CIT modules as well as extensive training under well-respected trappers in the project area.

Newsletters will be produced and circulated to all collaborators and a field day will be held promoting the activities of the project. In the third year a workshop will be run to present the project findings and recommendations to the Rural community, RLPB directors and staff, Trappers, Feral Animal Control Officers from NSW NPWS, State Forests NSW, DLWC, NSW Agriculture, the Rural Press and Scientists of BRS, CSIRO, ANU, UNE. Scientific papers will be produced on all aspects of the project and submitted for publication in the scientific press.

The impact of the dingo and wild dog predation is enormous and far-reaching. Cooperation and integrated management are essential components in pest animal control. The project focus to date has been to collect data from dog movements, establish a training program in pest management skills, hydatid research and the DNA sampling. David Jenkins and Peter Fleming are the two field coordinators, and they're both here today.

Two very important points

To finish , I'd like to reiterate two very important points from the landholders' perspective:

1) dingo and the wild dog attacks affect the entire farm enterprise and their community, it is not just limited to the sheep killed; and
2) we do need adequately funded pro-active management, accompanied with tolerance and understanding from all sectors.

Clearly, we all have a role to play in achieving the preservation of the dingo. Full cooperation and respect for stakeholder differences are essential for success in preserving the dingo.

References

Corbett, L. 1995. The Dingo in Australia and Asia. Australian Natural History Series, University of New South Wales, Sydney.

Fleming,PJS, and Korn,TJ. 1989. Predation of livestock by wild dogs in eastern New South Wales. *Australian Rangeland Journal.* **11**:61-66.

Gemmell, M.A. 1959. Hydatid disease in Australia VI. Observations of the carnivora of New South Wales as definitive hosts of Echinococcus granulosis (Batsch 1786), (Rudolphi 1801), and their role in the spread of hydatidosis to domestic animals. *Australian Veterinary Journal* **35**: 450-455.

Grainger, H.J. and Jenkins, D.J. 1996. Transmission of hydatid disease to sheep from wild dogs in Victoria, Australia. *International Journal for Parasitology* **26**: 1263-1270.

Jenkins, D.J. and Power, K. 1996. Human Hydatidosis in New South Wales and the Australian Capital Territory, 1987-1992. *Medical Journal of Australia.* **164**:18-21.

Flemming PJS and Saunders 1988. Interaction between feral pig, wild dogs and agriculture on the Tablelands and coast of New South Wales. Final Report to the Wool Research Development Forum on Project DANISP, P/p 116-158

Taylor, K. 1993. Hydatids in 1992: public health lesson update **2**;63-64, Department of Health and Community Services, Victoria.

APPENDIX

Appendix 1. RLPBs, Landholder and Imput

R.L.P.B.'s	$ spent	Landholder' $ spent & losses	Affected Properties	Comments
Bega	two Rangers - cost NPWS	$ -	55	Only 5,000 sheep approx - mainly cattle, calves - 11 klms electric fence, (cost not included.) Plus 200 former Braidwood affected producers since rezoned coastal.
Bombala	$8,349.00	$10,032.00	3	Additional contract work with NPWS. & State Forests
Braidwood	$10,522.00	$30,334.00	100	Very reliant on aerial baiting - Rangers time 8% bait station, 2% aerial, 10% advice and investigation.
Cooma	$15,074.00	$101,931.00	98	Micron range 17-22 - very reliant on aerial baiting - 294 properties next in line - 24 klm electric fence (1/2 construction and maintenance costs being met by landholders not included) - 45 properties altered management.
Gundagai	$2,783.50	$25,707.00	13	No system to record sheep kills - mainly baiting programme and landholder trapping - 1900 sheep no longer run.
Hume	Not available			
Yass	$41,548.00	$130,957.00	22	18 km electric fencing, (cost/maitenance not included) - trapping, baiting and marrema dogs used - no aerial baiting.
Sub Totals	$78,276.50	$298,961.00	291	
Total RLPB's & Ratepayers		$377,237.50		*N.B. Information gathered from RLPB's and Landholders is very conservative, itemised records are not available and very few landholders could be surveyed. "Yass Landholder Input" is a better indication as 80% of affected landholders contributed data.*
A.C.T. Lessee's Assoc.		$38,346	13	Micron range 17-21 - Govt. trapper made big difference to sheep killed in last 12 months - 2,338 sheep lost 3/95 - 6/96 ($12,000 electric fencing not included)

APPENDIX

Appendix 2. Yass RLPB Landholder Imput

Yass RLPB Districts	No. of affected Properties	$ Losses	$ spent	Total $ Cost	Comments - total sheep run in the area: micron range: control other than trapping/baiting/shooting:	Next in line - properties
Brindabella	2	1,730	11,166	$12,896.00	600 sheep, micron average 17, all bush runs abandoned - marrema dogs introduced(cost not included), lambing up 60% - almost continuous dog presence.	2
Burrinjuck	8	35,585	8,310	$43,895.00	19,200 sheep, micron range 17 - 19 - intermittent dog activity	0
The Mullion	7	1,625	9,781	$11,406.00	30,500 sheep, micron range 15 - 18, electric fencing 3klm(not costed in) - dogs in 2 monthly spurts 4 times a year.	3
Wee Jasper	5	38,600	24,160	$62,760.00	26,500 sheep, micron range 15 - 20. electric fencing 15klms (not included & in need of major work) - marrema dogs, new - almost continuous dog presence.	6
Totals	22	77,540	53,417	$130,957.00	*N.B. Wool and sheep prices have not been adjusted for finer micron or saxon breeding therefore very conservative figures.*	11
					N.B. These are Enterprises not just sheep losses. Genetics and future production and production gains have not been costed in. Trauma loss to life and production cannot be quantified and is not costed in. Value given - $30 wool, $35 sheep, $25 lamb/ kid	

Appendix 3. Agency Input

Agency	$ spent	Comments
A.C.T. Gov't	$45,000.00	Full time Trapper and Staff Field Officer when needed. Staff Officer expecting to be more active next 6 months.
Land & Water Conservation	$3,000.00	Input from Reserves Officer
N.P.W.S.	$126,100.00	NPWS Rangers, contracts with RLPB's and joint programmes with Landholders.
N.S.W. Ag.	$15,000.00	Input from Field Officers and some funding for aerial baiting and other dog control work.
State Forests	$40,000.00	State Forest Rangers, contracts with RLPB's and joint programmes with landholders.
Gov't Agency Total	$229,100.00	*N.B.These are Govt $'s spent within the RLPB areas of Bega, Bombala, Braidwood, Cooma, Gundagai & Yass*
ACT Lessees'	$38,346.00	
R.L.P.B.'s	$78,276.50	
" Ratepayers	$298,961.00	*N.B. Landholder wages based on RLPB Rangers wage.- Only a portion of affected landholders were surveyed.*
Grand total	$644,683.50	*N.B. Electric fencing:- existing fence conversion $560 / Km, plus $500 for energiser and solar panels, plus ongoing maintaintenance.*

QUESTIONS & ANSWERS

CHRIS JOHNSON: I'm an independent person who happens to be owned by three dingoes. I love the emotion you put in about the sheep being killed, and I can assure you there is nothing worse than seeing sheep mauled. I have family members that are on the land that do have sheep. All of them have said to me quite emphatically that the biggest losses they have sustained are from town dogs at night coming onto their farmlands. My own brother has never yet lost a sheep to a wild dog or a dingo; but at Tamworth, and at Cooma where he lives now, his sheep have certainly been under attack from other people's farm dogs. I'm not disputing your figures, but I wonder how many of those are actually wild dogs and dingoes and how many are farm dogs?

While we're on the subject of being so emotional about our farm animals, how many abattoirs have you seen sheep and cattle terrified and quaking when they see their mates killed? You know, you were very emotional; I can be emotional too. And what about the dogs that I've seen in the Riverina, height of summer, chained with no shade and a stupid tin pot for their water, and they call them pig dogs. Thank you.

HELEN CATHLES: I'll try and cover your points. Town dogs are a huge problem; they are responsible for some of the killings. However, it does depend on your location; if you're not near a town, wild dogs are usually the source.

If the dogs that are not cared for were to be seen by the Rural Lands Protection Board, or by anybody else, it would be reported because that's totally unacceptable. Any dog, whether they're a tied dog to keep stock from moving up a road or to remain in a certain area, must have adequate food, water and shelter. The term pig dog is not used for such a dog.

As to the abattoirs, I agree with you.

CATHY STACKER: Can you differentiate between the wild dogs that you see and dingoes? You can't?

HELEN CATHLES: We can't. No.

CATHY STACKER: No. So you use the words interchangeably.

HELEN CATHLES: I do.

CATHY STACKER: Right. Also, we'd have to know how you run your property, how many sheep you have, because just to show numbers of what you believe or perceive to be in terms of sheep losses means nothing. Thirdly, when you talk about - was it understanding and tolerance of the farming community?

HELEN CATHLES: The graphs covered large regions, not single properties, and are merely another way to present the spoken figures. Yes, and understanding and tolerance by the entire community.

CATHY STACKER: I find that really hard to do personally because you show none to the dingo. Surely it has to work both ways.

HELEN CATHLES: I don't quite know how to answer your last comment, because I don't think that people are cruel to dogs or to dingoes. They trap them and they shoot them when they are a problem. If a dog is not attacking sheep it will not be killed.

QUESTIONS & ANSWERS

CATHY STACKER: So what about other things, like (indistinct) Marremma dogs that are used in Europe for all sorts of stock, to keep the dingoes away?

HELEN CATHLES: They're also used in Australia. We have five. They are running with both sheep and goats.

CATHY STACKER: - - - the graphs.

HELEN CATHLES: In such a short time it's difficult to give a lot of information. I have more information that I've brought. If you want to see how those Cooma figures were established, I've brought the backing for those, and I've also brought the back-up for the other costings that I put out on those boards in 1997. So I've got it here, and you're most welcome to have a look at it.

DAN LUNNEY: Thank you, indeed, Helen. That's the end of this session.