



Guardian dogs will protect livestock – but new understanding of is needed

Livestock guardian dogs are believed to work by establishing and maintaining a territory. Direct confrontation may even be rare, as the wild dog stays away because of the presence of another dominant canine.

Photo: Lee Allen

By Cindy Benjamin

In some areas it seems the wild dogs are winning the war, the final straw driving many sheep producers out of their industry. So what about creating a biological barrier around animals?

Livestock producers can give their flocks the means to fight back against predators while allowing dingo populations to maintain an ecological balance, keeping a lid on kangaroo populations and possibly reducing fox and feral cat numbers.

Livestock guardian dogs (LGDs) are becoming increasingly popular in areas where predation is a constant threat, setting up and managing a territory around their flocks and herds.

They deter wild dogs that respect the territory and will also run down and kill predators that invade the territory. For this reason it is important that other working (herding) dogs, domestic dogs and visiting people are

introduced to the LGDs before ‘invading’ that territory.

Although livestock guardian dog breeds are not considered ferocious, they are quite unlike herding and domestic dogs. When reared as guardians they are quite independent and do not seek human company.

While they will often keep the flock together they do not have strong herding instincts and will rarely chase the livestock with which they are bonded.

Some individual dogs are prone to roaming and if this becomes a habit it can be difficult to cure.

Greg Hunt had several years’ experience working with guardian dogs on the Longreach Pastoral College properties in Queensland and is convinced of the dogs’ effectiveness.

“It is possible to have losses of more than 50 animals in one night or 100 deaths in a week,” says Hunt. “This represents severe financial costs and in some cases has forced

people to move out of the sheep or goat industry into cattle.”

Hunt is now a wool rep with the Australian Wool Network and says several of the network’s clients use livestock guardian animals.

He expects the number of graziers using guardian animals to increase to as high as 30% in the next few years in areas where predation is a constant threat.

Those promoting the use of animals to protect livestock have coined the term ‘livestock guardian animals’.

In doing so they avoid the confusion that can occur if the words ‘guard’ and ‘working’ are used to describe these animals, particularly dogs.

Livestock guardian animals (LGAs) include several breeds of dog, donkeys, llamas and alpacas. Of these, the most commonly used in Australia are alpacas for protection against fox predation (it is not advised to use alpacas or llamas for protec-



dog behaviour

tion against dingos and wild dogs as the dogs will attack and sometimes kill them) and Maremma, Anatolian and great Pyrenees dogs against dingos and dingo crosses.

Livestock guardian animals will bond with anything from traditional sheep and goats to cattle, poultry and even penguins.

Livestock guardian dogs are believed to work by establishing and maintaining a territory. Direct confrontation with a wild dog may even be rare as the wild dog simply stays away because of the presence of another dominant canine.

Finding out how livestock guardian dogs interact with wild dogs is the objective of a research study that has just commenced on Dunluce in northern Queensland. Biosecurity Queensland researcher Damian Byrne says the team is collaring Maremmas and dingoes from adjacent land to determine how the Maremmas operate and how large an area they are able to defend.

Despite all the interest in livestock guardian animals there is very little known about how producers are using them in Australian conditions.

PhD student Linda van Bommel is cur-

rently surveying farmers using livestock guardian dogs.

Guardian dog owners' survey

"At the moment we are not sure how many people are using dogs to protect their animals," says van Bommel. "So far I have interviewed 115 producers across Australia, representing 407 dogs."

Van Bommel says she hopes to speak to at least 150 property owners to discuss their management techniques and their experience with using livestock guardian dogs. Her survey will be followed with field studies to document how the dogs work.

"We want to know how much time they spend with the livestock and how much effort they put into establishing and managing their territory boundary," says van Bommel. "We will also determine if individuals within a group working in the same paddock take on different roles."

"We will also conduct experiments to measure the dogs' responses to artificial invasion of their territory, using urine and sound stimuli," she says.

"Another important part of this research

is to look at the influence of livestock guardian dogs on the populations of other species such as kangaroos and feral cats."

The livestock guardian dog breeds used in Australia have a long history in their native European countries, where they are generally used in packs and work alongside a shepherd.

In Australia and the US these dogs usually work alone or in small groups of two or three, without constant human supervision.

Some of the findings to come out of van Bommel's research so far are:

- * Most producers with LGDs have reduced their use of lethal control measures. Some still participate in strategic baiting programs while a few others are fully reliant on the LGDs for predator control.

- Some use self-feeders while others manually feed their dogs every day.

- On large properties the dogs run in groups and are usually allowed to move easily between paddocks, so protecting very large areas of land.

- Most producers with LGDs are aware of the need for good boundary fencing to prevent their dogs roaming.

- Three or four landholders surveyed were not satisfied with the LGDs they had purchased.

- LGDs can cause difficulties with neighbours. Some said they believed their dogs had been deliberately poisoned. LGDs have been guilty of roaming and even killing other livestock and some neighbours are simply unfamiliar with the way the LGDs work and have concerns.

"On the whole, the goat industry is far more accepting of the role of LGDs than other industries," says van Bommel.

"When people first get into goats they usually buy LGDs or other livestock guardian animals – it is just part of running a goat business."

Van Bommel is currently working with the National Wild Dog Management Advisory Group to produce a best practice manual for the use of LGDs in Australia. "The manual should be available sometime next year," she says.

The ecological role of wild dogs

Dr David Jenkins, senior research fellow in parasitology at the School of Agriculture and Veterinary Science, Charles Sturt University, has a long-standing interest in the role of wild dogs and foxes in the spread of hydatid disease.

Canids are the main host for spreading hydatid disease to herbivores (including sheep and kangaroos) from eggs deposited



AUSTRALIAN
CERTIFIED
ORGANIC

CERTIFIED

Integrity.

CERTIFIED

Assurance.

CERTIFIED

Market access.

“The standard
in Australian
organics”



AFJ1106628

Enquiries 07 3350 5706
info@aco.net.au
www.aco.net.au

ACO is a BFA company
www.bfa.com.au

WILD DOG CONTROL



Linda van Bommel survey of businesses who use livestock guardian dogs has found that goat farmers are early adopters of the strategy.

in faeces on pasture. Working dogs can also become infected if they are fed an infected kangaroo carcass. Infected animals develop cysts on their lungs.

“In my work on controlling hydatids I became interested in the management of wild dog populations and particularly the use of livestock guardian animals,” says Jenkins.

“In many areas foxes are by far the greatest cause of livestock losses yet the losses go largely unnoticed because foxes remove the carcass. Producers who introduce llamas and alpacas to guard their



Dog-proof fencing prevents livestock guardian dogs roaming where they may disturb other livestock or take a bait.

Photo: Cindy Benjamin

sheep (against foxes) will often report a 10%-15% increase in lambing rate."

Aside from the financial losses to predation, Jenkins recognises the very real and significant emotional stress related to wild dog predation.

"Being faced with dead and maimed stock is often the last straw for people who then want wild dogs eradicated," says Jenkins. "However, I believe livestock guardian animals are the only real solution – separating predators from the livestock."

Jenkins says most dogs killed in control programs are innocent of any attack on livestock. He says dingoes play an important role in the ecology, reducing the pressure of kangaroos on the grass available to livestock.

"While it is true that many wild dogs are domestic-dingo hybrids, this does not mean that all these dogs are behaving badly," says Jenkins.

"The majority of wild dogs still form cohesive packs and have only one litter per year, unlike domestic dogs that are capable of having two litters per year.

"Indiscriminate control measures such as baiting are known to disrupt the pack structure and can lead to an increased number of young dogs the following year – all looking for territories of their own.

"Using livestock guardian animals gives landholders peace of mind and allows the wild dog population in bushland to stabilise and perform its ecological duties," says Jenkins. "Individual dogs that continue to cause losses should still be targeted with lethal control measures.

"Having said this, landholders can not rely on LGAs alone; they need to be part of a co-ordinated management strategy against predation on a property," says Jenkins. "Landholders often find the best results from LGAs occur in the first year, after which some foxes and wild dogs learn ways to avoid the LGAs."

Professor Chris Johnson is an ecologist at James Cook University. His studies of the role dingoes play in the Australian environment suggest that they may protect biodiversity, mostly through the suppression of foxes and feral cats.

"This is particularly noticeable in arid environments but is also observed in tropical forests and savannas."

From an ecological perspective the greatest biological benefits occur when dingoes are present rather than hybrids, but even hybrid dogs still have a beneficial effect on suppressing fox numbers.

"Most hybrid dogs exhibit many traits in common with dingoes," says Johnson.

"The exceptions are when the hybrids are formed with particularly ferocious breeds such as Alsatians and pig-dogs. These particular hybrids have very little in common with dingoes."

Dingoes respect dogs' territory

"Dingoes will strongly defend their territory and respect the territories of other canines," says Johnson.

"This is what makes livestock guardian dogs so effective at separating livestock from wild dogs even at very large scales.

"Livestock guardian animals, particularly dogs, are the only strategy that solves the predation problem because, unlike with baiting, the problem does not keep reoccurring.

"Many landholders with LGDs find

their stock are less stressed and so are easier to handle and produce better wool."

Johnson says LGDs are still very effective against hybrid dogs even though these dogs may be less territorial than dingoes and often do not form cohesive packs.

"Livestock guardian breeds are several thousand years old and have been selectively bred as large, dominating dogs that bond

THE ANSWER TO PREDATOR CONTROL
MAREMMA SHEEPDOGS
 PROTECT LIVESTOCK FROM 4 AND 2 LEGGED PREDATORS.



FOR PUPPIES AND TRAINED DOGS CONTACT:
R. MCCARROLL
LURGENGLARE MAREMMAS
 18 HODGE AVE. INVERGORDON, VIC. 3636
 PHONE/FAX: (03) 5865 5267
 e-mail: lurgenglare@maremmalgd.com

STL110964

Casa Di Cani
 Kennels



Linda & Tony Bagnall
 Phone: (02) 4357 1913
 Email: casadicani@comcen.com.au
 www.comcen.net.au/~birichino

Lurgenglare Fratta Aust Ch Amarcord Birichino TT
 Lurgenglare Mara Aust Ch Abruzzo (imp It) TT

Casa Di Piero Marzano Anzani
 AFJ1115745

MaremcDonald Maremmas

- Working LGD with Cattle, Poultry and Goats
- Socialised and raised with livestock
- Quality pups ready 18/09/09
- Vacc/M.ch/Wmd/Reg.
- Started dogs available for immediate needs

W.Ferry, NW Sydney, 2775
C Deakin - Reg Brdr - 02 4566 4217

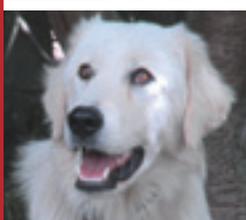
AFJ1115922

MAREMMANO KENNELS

- Puppies born April 2009 available July.
- Registered, microchipped and vaccinated.
- Superior Australian & Italian Bloodlines.

Contact: **John Roger**
 Email: **morango@mohair.net.au**
 Mobile: **0414 988 673**
 Phone: **03 5266 1359**






AFJ1115966

WILD DOG CONTROL

well to livestock,” he says. “Their bark and possibly their scent is very threatening to intruders. Two or three Maremmas will provide effective protection to livestock on a 5000-hectare property.”

Johnson emphasises the need for commitment from landholders who decide to use livestock guardian dogs.

He says landholders need to invest time managing their dogs but that the commitment will be rewarded, keeping in mind that the change may take several years to fully implement.

It is clear that well-managed livestock guardian dogs are very effective and it is likely that the number of landholders using them as part of their management system will increase. However, they do not provide the whole solution. In agricultural areas, particularly within the wild dog barrier fences, there are several reasons to keep wild dog populations in check using lethal measures.

In these areas LGDs may be best employed on properties adjoining national parks and state forests.

National wild dog co-ordinator Greg Mifsud emphasises the importance of all producers being involved in a co-ordinated effort to control wild dogs.

“The participation of all landholders in an area is critical to reduce the pressure of predators,” says Mifsud.

“Using LGDs provides peace of mind around the clock for producers who use them but it does not reduce the scale of the problem.

They are one tool in a range of control measures at our disposal and can be integrated into an effective strategic and co-ordinated wild dog management program.

The aim is to reduce the number of wild dogs inside the country’s wild dog barrier fences and manage the impacts of wild dogs in areas outside the fences.”

Find out more:

‘Guard animals for livestock protection: existing and potential use in Australia’ by David Jenkins (2003): download from www.dpi.nsw.gov.au/agriculture/livestock/sheep/management/general/guardanimals

Professor Chris Johnson
Christopher.johnson@jcu.edu.au
Linda van Bommel
linda.vanbommel@anu.edu.au
NWD MAG facilitator Greg Mifsud
(07) 4688 1333

Ninian and Ann Stewart-Moore
www.dunluce.com.au

Leading Sheep field day notes (September 2008) – notes on guardian alpacas, donkeys and dogs: download from www.leadingsheep.com.au/predator.doc

Using livestock guardian dogs in the rangelands

Hughenden graziers Ninian and Ann Stewart-Moore have been overwhelmed by the increased interest in livestock guardian dogs in recent months. “We are getting two or three phone calls each week from graziers wanting to know more about using Maremmas to protect their livestock,” says Ninian Stewart-Moore.

The Stewart-Moores currently run 12 000 sheep and 5000 cattle on Dunluce, a 46,500-hectare property on the Flinders River, west of Hughenden in north Queensland. “We are one of only a few left in the sheep industry here,” he says. “In 2002 losses to wild dogs were costing us around \$30,000 a year; we decided to invest in 24 Maremmas, costing us around \$20,000 in total set-up costs, as a last resort to stay in the sheep industry.”

Another benefit of having the Maremmas has been the reduction in kangaroo numbers. While the dogs do not hunt the kangaroos, the ‘roos simply avoid the dogs so more grass is available for the sheep and cattle. Stewart-Moore estimates the reduction in ‘roo numbers to be as high as 90% compared to the years before the Maremmas’ introduction.

Since incorporating the Maremmas into their management system, the Stewart-Moores have seen the losses to wild dogs drop to almost nil, while there are still plenty of dogs in the area. “We have learnt a lot about the management of the dogs on a large-scale property and are keenly interested in the information that will come from Lee Allen and Damian Byrne’s study using GPS collars on eight of our dogs.”

Stewart-Moore recently began bonding three Maremma puppies with a small group of heifers. After a couple of months the pups were taken, with ‘their’ heifers, into a mob of 350 head. “The dogs need proper bonding and people starting out with guardian dogs need to be willing to commit themselves to the management of the dogs and to be ready to understand how they work.”

Maremmas are nocturnal and will often travel 10 or 15 kilometres at night, patrolling the boundary or investigating

sounds. They also bark fairly constantly, which can be a problem in closer-settled areas. The Stewart-Moores do not have



Ninian Stewart-Moore is successfully using guardian dogs on his station in north central Queensland. This Maremma has a GPS tracking collar for research into guardian dog/wild dog interaction.

Photo Damian Byrne

any dog-proof fencing so the dogs are free to move between paddocks and onto neighbouring properties.

“In the first few years we lost some dogs and assume that they roamed and took baits from neighbouring properties,” says Stewart-Moore.

“Now that the dogs are well and truly settled here, they have formed their own social networks and that problem has reduced. We invested considerable time and money in setting up the dogs seven years ago but this investment has given us a long-term solution to the wild dog problem,” he says.