Wildlife Research

Supplementary Material

Still a good dog! Long-term use and effectiveness of livestock guardian dogs to protect livestock from predators in Australia's extensive grazing systems

Linda van Bommel^{A,B,C,*}, and Chris N. Johnson^{A,C}

^ASchool of Natural Sciences, University of Tasmania, Private Bag 5, Hobart, Tas. 7001, Australia.

^BFenner School of Environment and Society, Australian National University, Canberra, ACT 2601, Australia.

^cNational Environmental Science Program Threatened Species Recovery Hub, Centre for Biodiversity and Conservation Science, University of Queensland, St Lucia, Qld 4075, Australia.

*Correspondence to: Linda van Bommel School of Natural Sciences, University of Tasmania, Private Bag 5, Hobart, Tas. 7001, Australia Email: linda.vanbommel@anu.edu.au Questions are only to be asked if they are relevant to an individual's situation.

- Back in 2008/9, you told me you were using livestock guardian dogs to protect livestock. Are you still using guardian dogs for predator control?

If yes, go to page 3

- If no:
 - \circ Why not?
 - How long have you used guardian dogs in total?
 - What happened to your dog(s)? (cause of death/age at death/rehomed?)
 - Do you think that in general your LGDs became more effective/less effective/or stayed equally effective once they operated on your property for a longer time?
 - Do you think older dogs lose effectiveness over time?
 - Are you still running -type of livestock indicated in first survey ?
 - Ask for numbers of stock and size of property
 - You indicated in 2008/2009 that your predators were *type of predator(s) mentioned in the first survey*-, are they still your main predators?
 - *If still running stock, (or other type of stock),* how many livestock are you losing to predators now (*in the past year, or per year*)?
 - *If still running stock (or other type of stock),* what predator control are you using now?
 - How much time/effort/finances does this cost?
 - How does this compare to the dogs?
 - Compared to 2008/2009 is there more or less regional predator control in your area? Has that affected predation on your property?
 - Have any neighbours or others in the vicinity adopted the use of guardian dogs since the last survey? How many? How far away from you?
 - Do you think this was a result of your use of guardian dogs, or for some other reason?

- Would you ever get guardian dogs again, or recommend them to other people?
- What are the main advantage and disadvantage of guardian dogs?

- If yes:
 - Are they still the same dogs as in 2008/9, or are they different ones (*get history of changes in dogs, new dogs' ages/sex etc, cause of death of old dogs, age of death*)
 - In 2008/2009 you indicated you ran your dogs-free-ranging/fenced, separate/in groups, with -type of livestock mentioned in first survey-, do you still run your dogs this way?
 - If so, double check with participant the total number of owned stock, number of stock the dog(groups) are working with, number per dog(group) and sizes of areas they are working on.
 - If not
 - How do you manage your dogs now? (in groups/separate, fenced/free-ranging, size of area they are working on, no. of livestock they are working with per dog(group), number of dogs per group)
 - How many livestock do you own, and how many are the LGDs guarding?
 - Why did you change their management?
 - You indicated in 2008/2009 that your predators were *type of predator(s) mentioned in the first survey*-, are they still your main predators?
 - How much stock are you losing to these predators at the moment (in the last year, or on average each year)?
 - Do you think that in general your LGDs have become more effective/less effective/or stayed equally effective between now and the first survey?
 - Do you think older dogs lose effectiveness over time?
 - \circ Are you using any other predator control methods apart from the dogs?
 - Which ones?
 - How much are these costing in terms of time/effort/financially?
 - Compared to 2008/2009 is there more or less regional predator control in your area? Has that affected predation on your property?

- In 2008/2009 you indicated you trained your dogs *bonding/training method they described in the first survey* -. Do you still do this, or has this changed?
 - If changed:
 - Why did you change this?
 - How do you train them now?
- How much time/effort/finances are you spending on your dogs (per day/week/year)?
- Have any neighbours or others in the vicinity adopted the use of guardian dogs since the last survey? How many? How far away from you?
 - Do you think this was a result of your use of guardian dogs, or for some other reason?
- Would you recommend guardian dogs to other people?
- What are the main advantage and disadvantage of guardian dogs?