Optimising the work of dogs

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“Dog” people

“Dog” people

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- Dog whisperers feature heavily in the media, each with various “techniques for success”.
- Techniques do not guarantee good results in practice…
- No data currently exist on why some individuals are so talented with dogs.

Successful animal trainers…

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- Are consistent in their behaviour
- Optimise timing of cues and reinforcers.
- Effectively communicate with their trainees.
- But what makes this communication so effective?

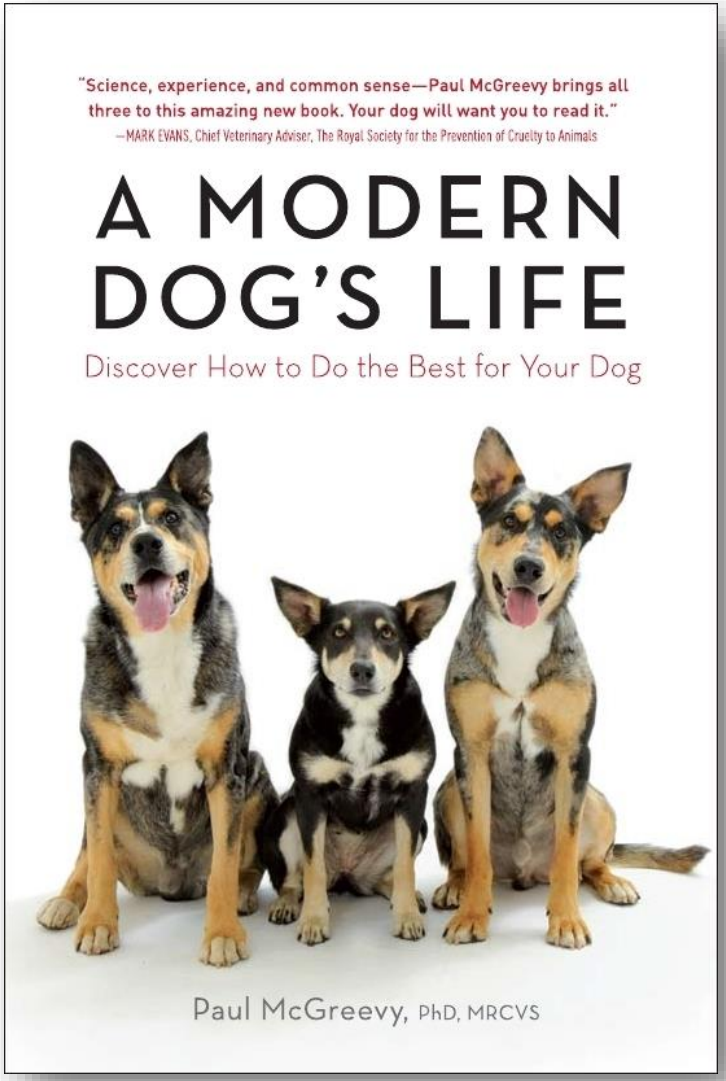
“Horsemanship”

- How we approach horses
- How we move around horses
- How we handle horses
- How we talk to horses
- How we train horses
- How we relate to horses

“Dogmanship”

- How we approach dogs
- How we move around dogs
- How we handle dogs
- How we talk to dogs
- How we train dogs
- How we relate to dogs

What dogs want



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What dogs value

The most important question for the thoughtful dog owner is: *What do dogs value and why?* The answer will help us assess our dog's behavioural needs. Instead of merely accepting that dogs like food, we should ask: What is it about food that makes them work for it and fight for it? Instead of simply marvelling at a sniffer dog's approach to detective work, we should consider why its tail is wagging. Instead of just knowing that dogs enjoy exercise, we should explore what an exciting walk can offer a dog and how a bland walk or, worse still, no exercise at all can frustrate it. All of these questions help us to avoid judging dogs by our own standards. To understand what a dog values is to take a walk in its paws.

Consumer demand theory

Animal welfare science has blossomed over the past two decades. Among other studies, it measures the needs of domestic and captive animals and helps us to rank the importance of the resources we offer them. One of the most common principles in this work is

The Farm Dog Project

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Rural Industries Research

and Development Corporation

Meat and Livestock Australia,

Working Kelpie Council of Australia

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Australian Government

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MEAT & LIVESTOCK AUSTRALIA

Project aims

- Better define the contribution of stock working dogs to the rural economy.
- Understand dog selection, breeding, management and training practices.
- Identify valuable behavioural attributes in successful working dogs
- Measure and record behavioural attributes in farm dogs.
- Identify genetic markers that predict working dog success.
- **Ultimately, save producers time and money by allowing them to select for traits of value in their working environments.**

Ultimate goals

- Define optimal training methods
- Define optimal husbandry methods

- Optimise breeding strategies by identify valuable behaviours for genetic analysis

→ maximise performance

→ minimise wastage

→ improve canine welfare

The Farm Dog Survey

› Target population: Australian livestock producers

91,000 farmers of sheep, beef, mixed livestock*

› Response

Type	Number	Percentage (%)
On-line	801	98.6
Hardcopy	11	1.4
Total	812	100

› Details on: 1,634 dogs currently in work

2,221 past dogs (retired and culled)

Working dog productivity- labour efficiency

› Output

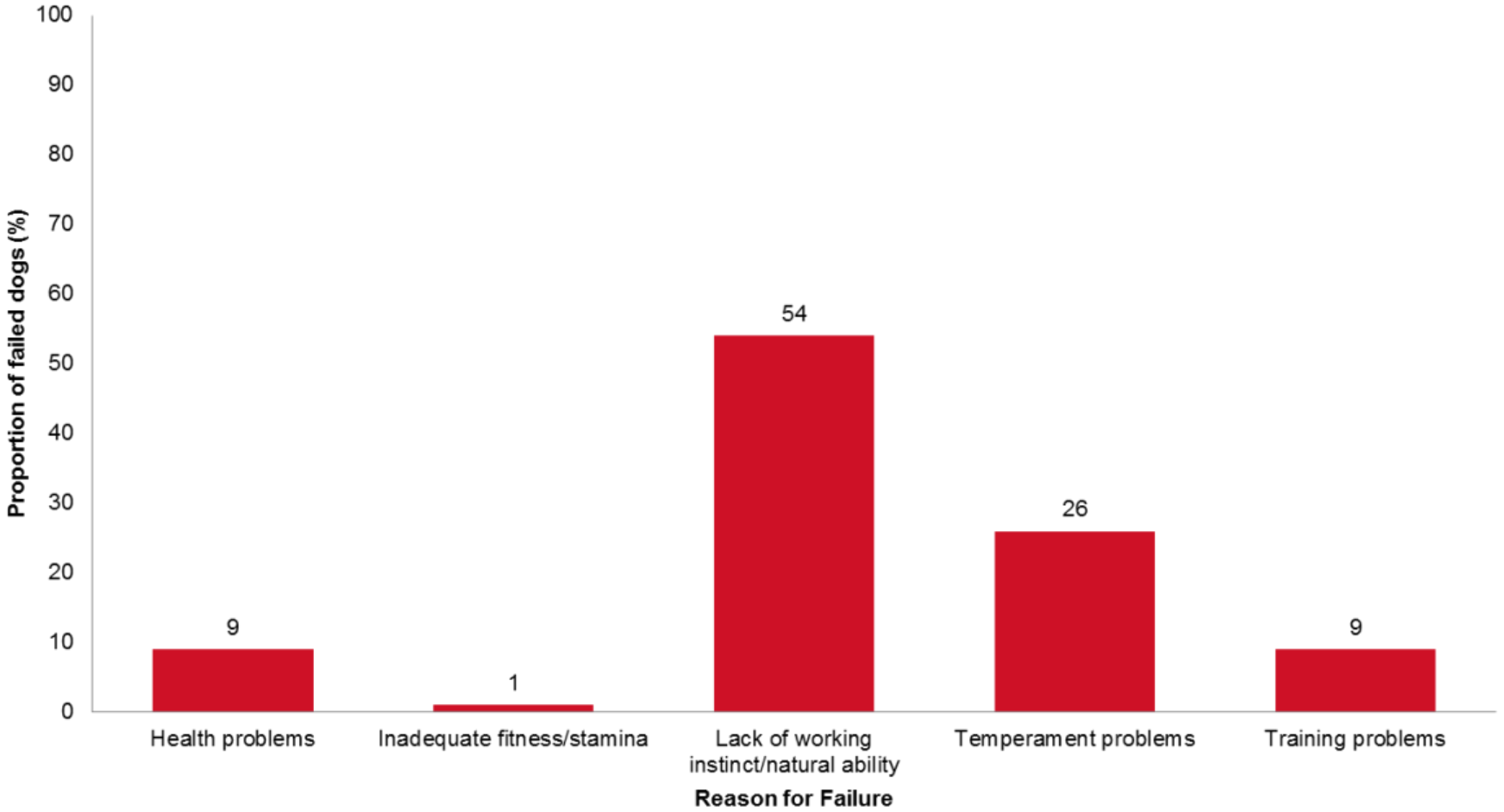
Hours/ day	Days/ week	Weeks/ year	Years	Pay rate ($)	TOTAL
5	5	8	10	20	**$40,000**

› Input

Expense	Calculation	Total
Purchase	$250 x 1	$250
Maintenance	$600 x 10 years	$6,000
Veterinary	$100 x 10 years	$1,000
Training	$20/hr x 1hr/month x 12 months	$240
Wastage	$1,090 x 0.25	$273
TOTAL		**$7,763**

› Productivity = $\frac{\$40,000}{\$7,763}$ = **5.2**

Reasons for failing of working dogs in training

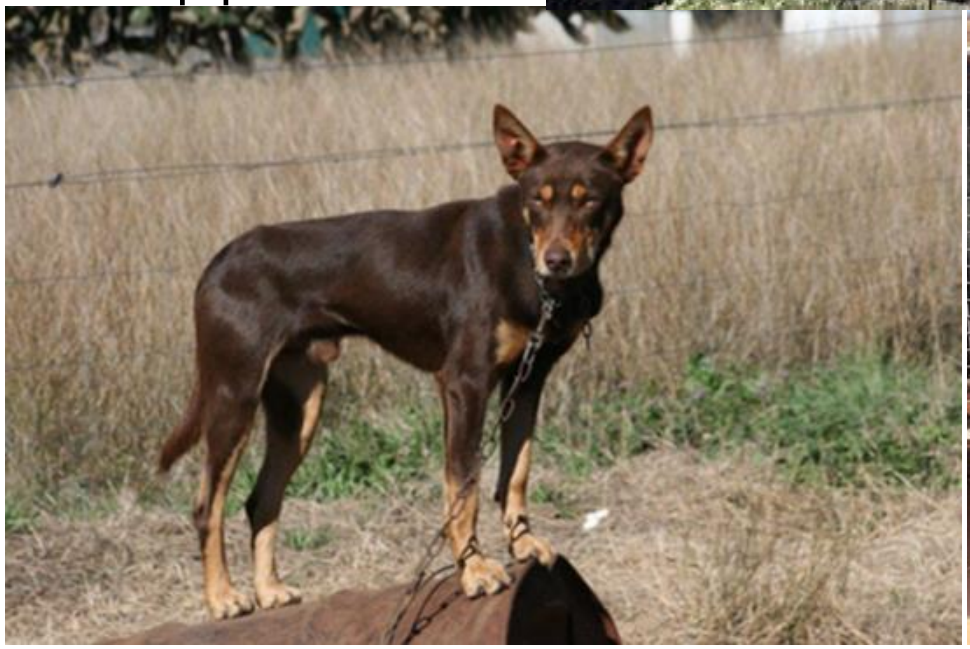


Factors associated with canine success rates - “Red flags” for welfare compromise.

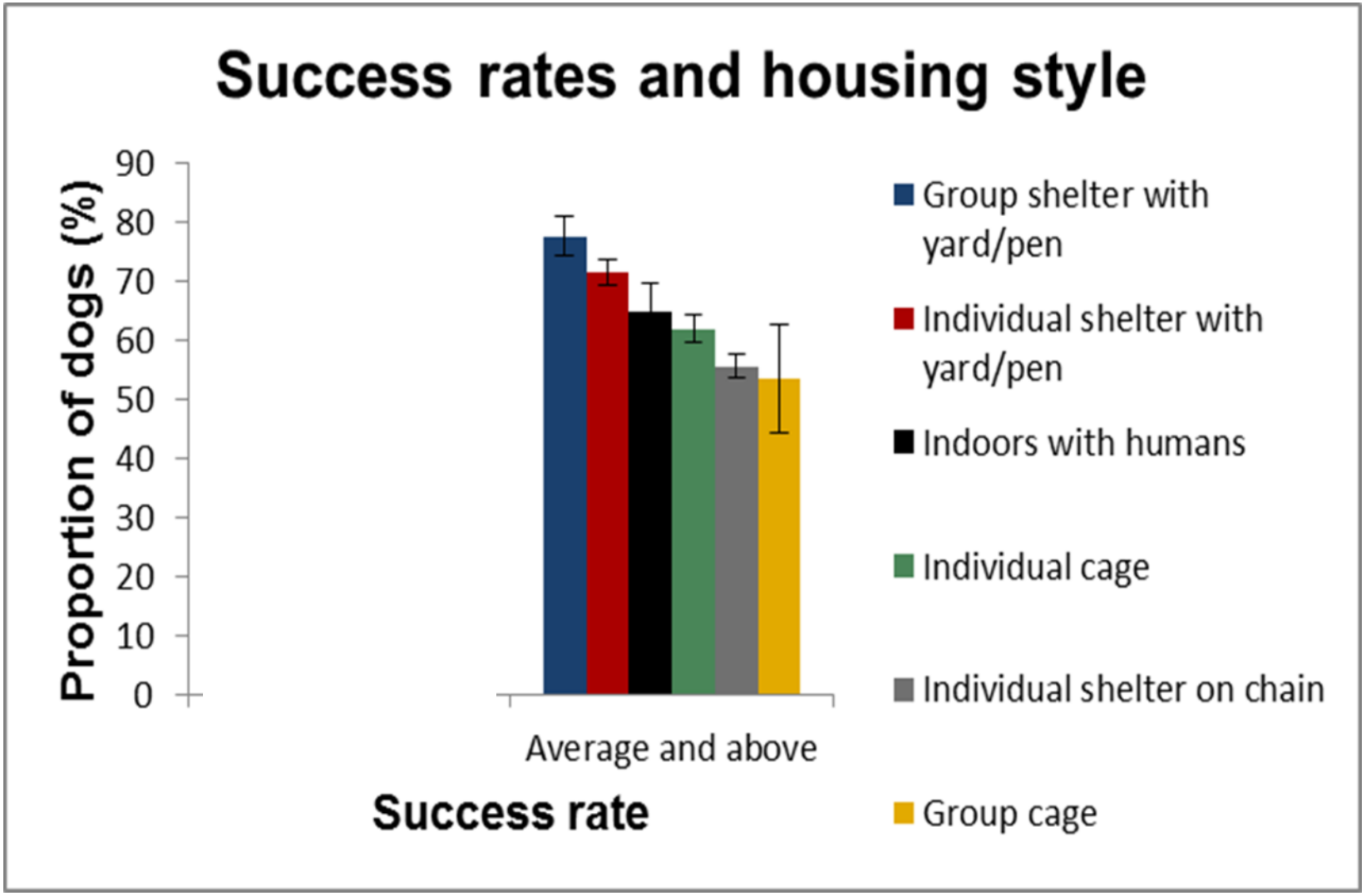
- Dog breed
- Participation in dog trials
- Age of the dog at acquisition
- $$$$ handlers estimate they would spend to treat their best dog for an illness to return it to work
- Method of housing dogs
- Electric collar use
- Handler conscientiousness personality score

Husbandry

- Housing ($p<0.001$)
  - Chain 32%
  - Individual cage 27%
  - Individual pen 25%
  - Group pen 8%



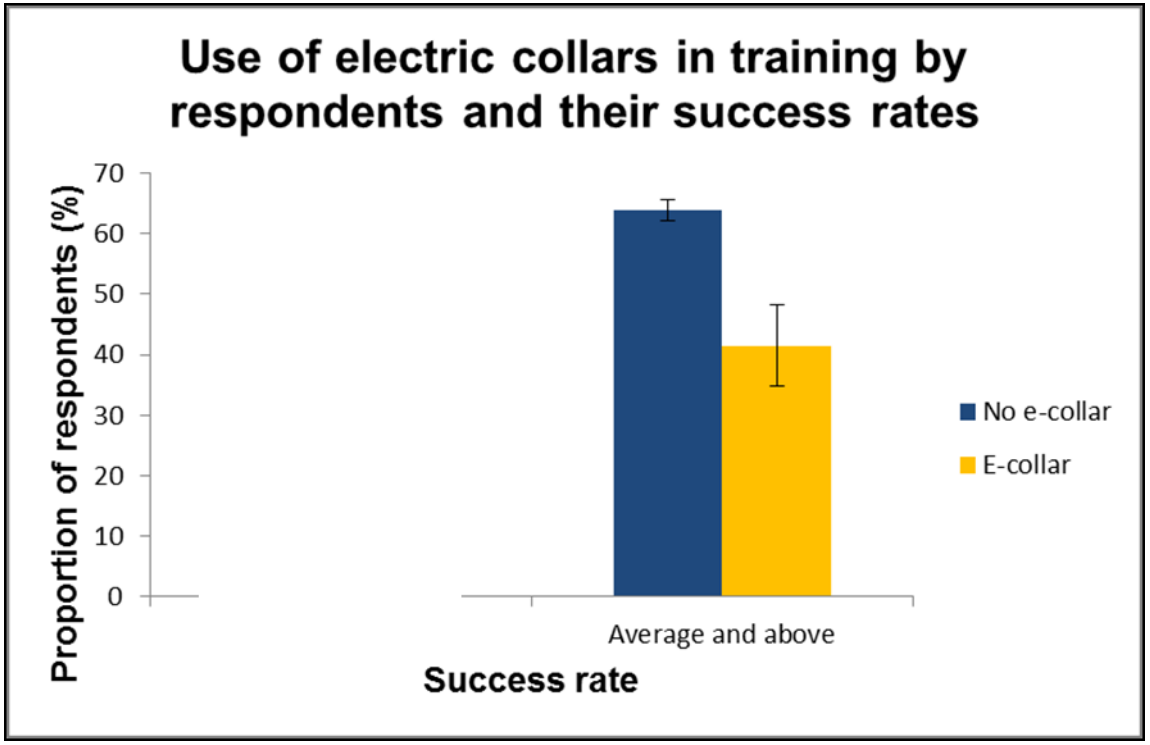
Housing (p<0.001)

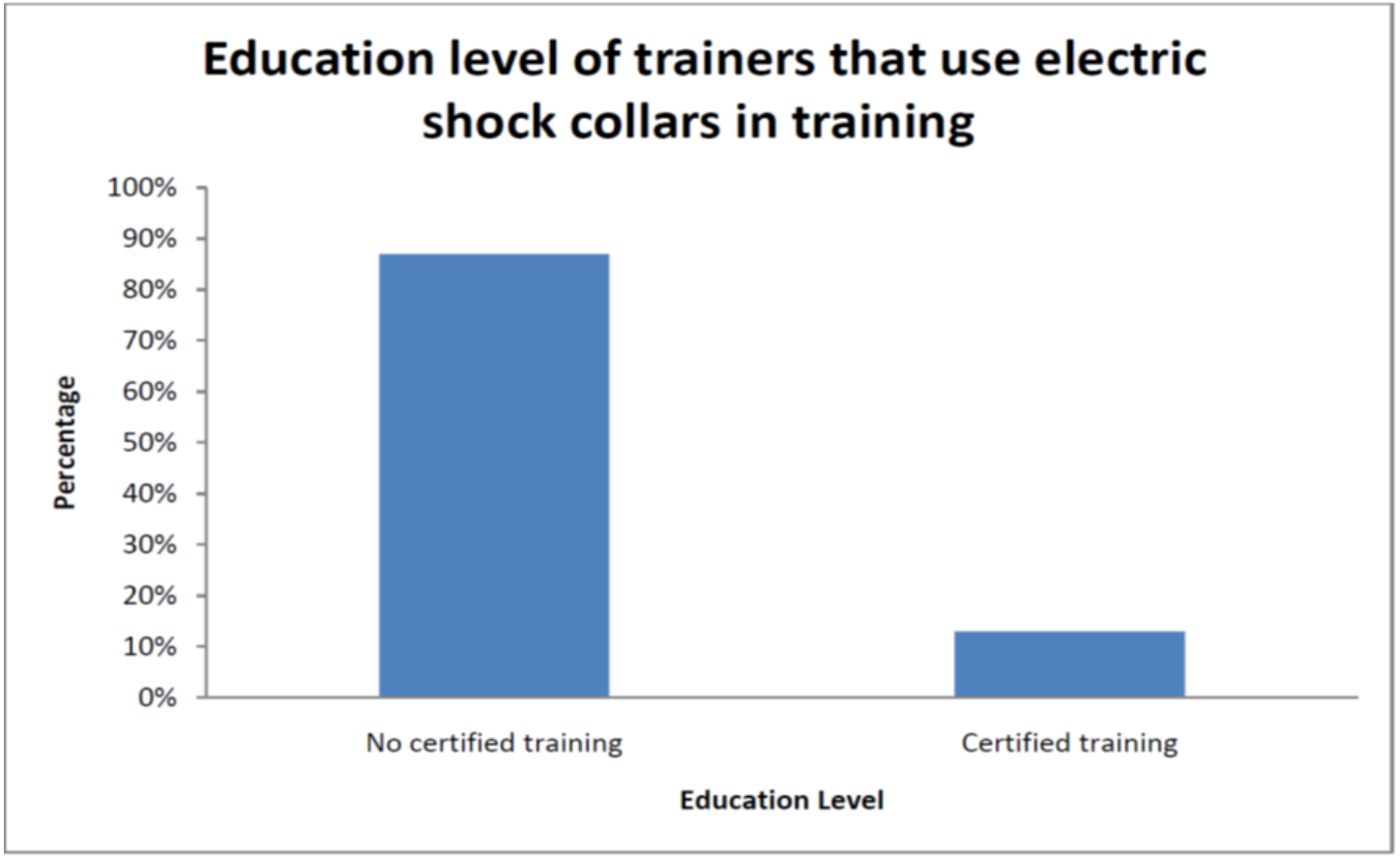


Training

› Electric shock collar use (p = 0.001)

7% respondents (n= 53)

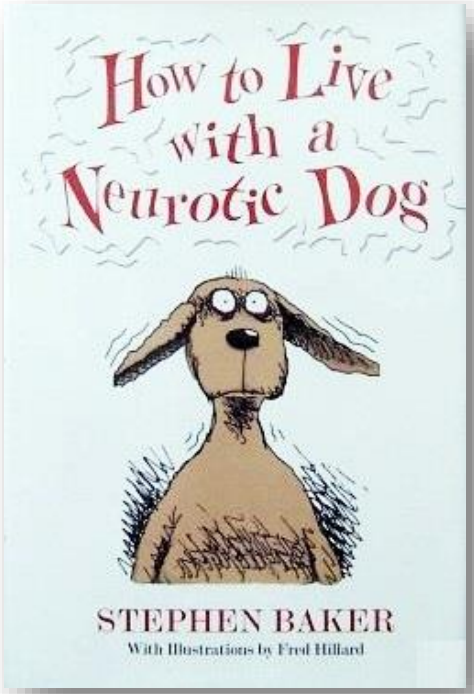


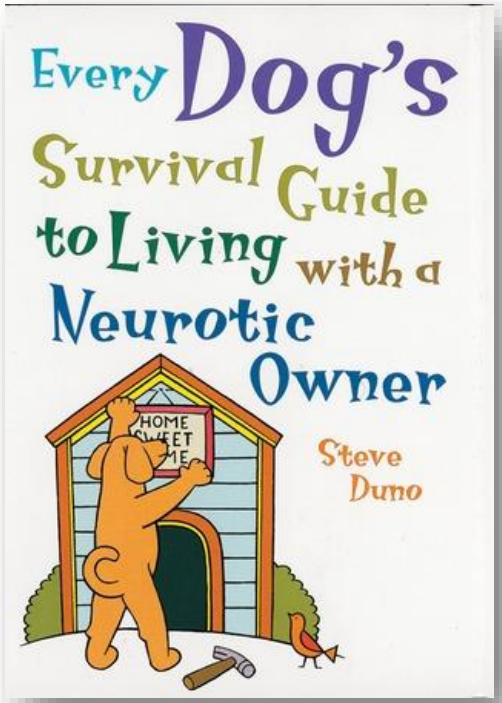


Branson N, Cobb M, McGreevy, P (2009) Australian Working Dog Survey Report Department of Agriculture, Fisheries and Forestry, Australian Animal Welfare

Conscientious vs Neuroticism

- **High neuroticism scores in dog owners**
- poor canine performance in operational tasks,
- handlers' use of excessive signaling during training
- delayed responses to owner commands





Next steps

- Are dogmanship skills mainly innate?
- or mainly learned?

Triad

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INNOVATION

As a company we believe you have to do more than add value, you have to create it. That belief has put the company on a relentless drive to innovate at every opportunity, from plate to pasture. We have partnered with key organisations and other leading New Zealand businesses to make this happen.

Innovation from Plate-to-Pasture

Through the New Zealand Government's Primary Growth Partnership Programme, and our partners Landcorp Farming and Tru-Test Group, we have created FarmIQ Systems Limited. The $150 million joint investment we have made in designing an integrated demand-driven value chain and farm management system will enable our farmers to supply our consumers with inspirational food that exceeds expectations.

We believe innovation like this will keep Silver Fern Farms at the forefront of the red-meat industry.

Abattoirs

The potential cost to the industry of dogs being removed from abattoirs comes from a variety of direct and indirect sources.

- Survey of 9 Australian abattoirs in February 2015.
- 4 of the 9 abattoirs considered dogs essential to operations, and a further 3 considered them very important.
- 4 of the abattoirs estimated that adapting to work without dogs would require the redesign of their facility, representing major works.

- Dogs are used because they reduce workload for humans.
- Dogs improve job satisfaction and reduced frustration.
- Removing dogs would necessitate the employment of an extra 1-2 stock handlers per dog replaced per shift.
- Abattoirs are using 2-10 dogs per shift => to continue without dogs would require a major plant redesign.
- **The loss of dogs would increase the load on both physical health and safety in stock handlers, through increased contact with livestock and a substantial increase in ground covered per shift.**

A research project with MINTRAC

- *If dogs are removed from abattoirs, stock handlers may not be able to move sheep through the yards as efficiently.*

- *3 tests:*
- handler with no dog
- handler with a restrained dog.
- handler with a good dog actively helping.

Measures

- Measure of optimal movement will be used to determine the difference dogs make to stock handlers' work.
- Behavioural indicators of stress in sheep such as head position, mounting, and stalling.
- Plasma cortisol concentration.

- Support
- Mintrac
- RIRDC
- AMPC pre-proposal

Thank ewes

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