

Testing the killing performance of the SA2 Kat trap



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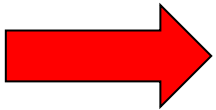


LANDCARE RESEARCH
MANAAKI WHENUA

Background

The International Organisation for Standardisation (ISO) developed a standard for testing traps

The National Animal Welfare Advisory Committee (NAWAC) took these standards and developed New Zealand specific guidelines for assessing the welfare performance of restraining and kill traps



<http://www.mpi.govt.nz/document-vault/8521>

Kill trap testing

Animal Ethics Committee approval required for animal testing

- Class A kill traps
Animals irreversibly unconscious under 30sec
- Class B kill traps
Animals irreversibly unconscious under 3min



Choice of sample size but normally 10 animals

Larger sample size allows leeway for animals to exceed the threshold but they still need to be killed

Why do a NAWAC trap test?

- No legal obligation to use traps that meet the NAWAC trap- testing guideline, but public pressure for more humane pest control tools
- Agencies and manufacturers wanting to be seen to be promoting more humane traps
- No kill traps have been prohibited in NZ but some leghold traps have

-precedent for prohibiting traps with excessive welfare compromise.



Landcare Research's role

- Provide a service and facility for manufacturers and agencies who want traps tested
- Advice on trap design based on 15 years of trap testing of 40 different designs on 8 different species
- Observation pens with IR video surveillance so animal interaction with traps and capture outcomes can be monitored
- Frame by frame video playback and necropsy experience to determine cause of trap failure and potential solutions



Testing the SA2 Kat trap

- Partnership between Northland Regional Council and trap manufacturer Steve Allan
- Awareness of the impact feral cats have on the NZ environment and the need for effective control tools



The challenge:

- Control cats using tools that meet acceptable welfare standards
- A trap design which is practical and easy to use.

The SA2 Kat trap



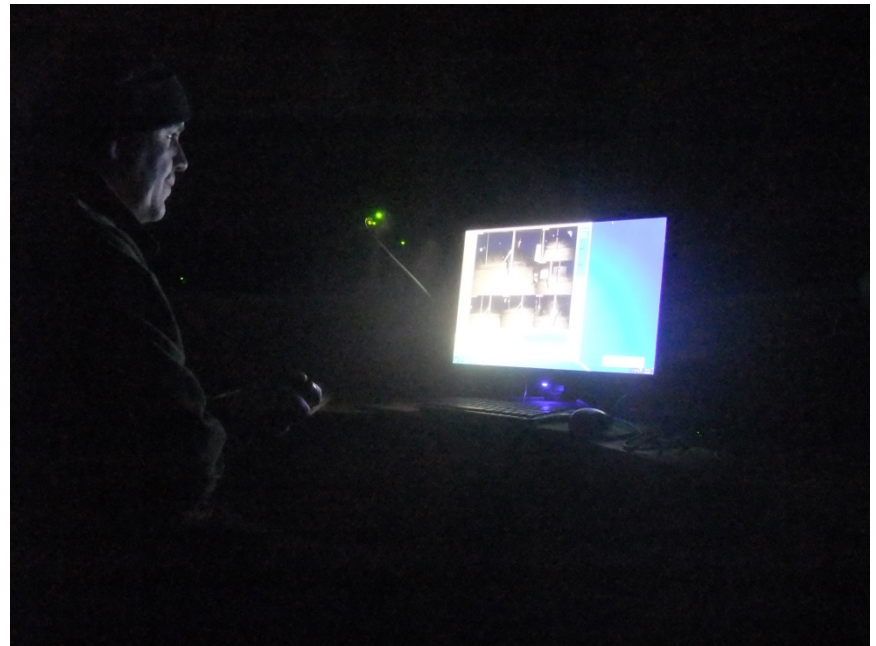
Testing

- Live capture feral cats and acclimatise them to captivity
- Individually pen cats in Observation Pens (6)
- Set traps and turn on video cameras
- Sit in the dark with thumb poised over stopwatch

Wait.....

and wait.....

and wait some more.....



Results – Stage 1

Weight (kg)	Sex	Loss of blinking reflex (min:sec)	Heart stop (min:sec)	Strike location	Notes
2.52	F	<1:05	4:37	Neck	
3.93	M	<2:00	3:25	Neck	
3.50	F	-	-	Neck	Pulled out @ 7 sec

First Modification:

Increase in trigger depth



Results – Stage 1

Weight (kg)	Sex	Loss of blinking reflex (min:sec)	Heart stop (min:sec)	Strike location	Notes
4.05	M	<1:01	4:28	Neck	
3.11	F	<1:29	4:48	Neck	
4.44	M	-	-	Neck	Pulled out @ 2 sec

Second Modification:

Ground-set trap to stop cats pulling down when captured



Results – Stage 1

Weight (kg)	Sex	Loss of blinking reflex (min:sec)	Heart stop (min:sec)	Strike location	Notes
3.55	F	<1:29	3:55	Neck	
4.18	M	1:25	5:10	Neck	
4.70	M	1:15	3:47	Neck	
3.27	F	1:12	4:54	Neck	
4.54	M	2:42	6:00	Neck	
4.95	M	-	-	Neck	Pulled out @ 13 sec

Further tweaking required

New Improved SA2 Kat trap

- 40% stronger spring = big increase in clamping force
- Trigger depth increased (85 to 90mm)
- Downward angle of the leading top edge increased



Results – Stage 2

Weight (kg)	Sex	Loss of blinking reflex (min:sec)	Heart stop (min:sec)	Strike location
2.29	M	<1:10	3:52	Neck
2.40	F	<1:05	3:16	Neck
1.50	F	<1:11	4:38	Neck
2.77	F	<1:05	4:24	Neck
2.77	F	<1:00	4:30	Neck
1.49	F	<0:57	5:13	Neck
1.81	M	<1:10	3:58	Neck
1.64	M	<1:30	4:59	Neck
3.80	M	<0:50	4:38	Neck
2.92	F	2:40	4:47	Neck

Trap passes the NAWAC trap testing guideline

Conclusions

- The SA2 Kat kill trap passed the NAWAC trap-testing guideline when tested on feral cats.
 - The final changes increased kill efficacy because cats were unable to pull out
- The trap is easily set with no adjustments required
- The trigger style has low probability of paw capture
- This style of trap could also be effective for capturing possums but a different trigger depth and trap size may be required for specifically targeting possums

Recommendations

- If Northland Regional Council wish to use kill traps for targeting feral cats that have passed the NAWAC trap-testing guideline, they should support the use of the SA2 Kat trap.
- The manufacturer should provide setting and baiting instructions to users as per those used for the NAWAC test.
- The SA2 Kat trap or a similar design should be submitted for NAWAC testing on possums.

Acknowledgements

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