

1 **Limited evidence on the effectiveness of interventions to reduce livestock predation by large carnivores**

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10 Table S1. Distribution of all studies identified as applying a quasi-experimental or experimental design, among intervention groups.

Intervention group	Study	Intervention type	Carnivore species	Livestock	Sample size	Duration of study
Change livestock	Landa et al. ²⁶	Replace Dala sheep breed (70-80 kg)	Wolverine (<i>Gulo gulo</i>)		One area, 3877 control (Dala) lambs	3 years
		with				
		a) Norwegian short tail breed (65-70kg)		a) Lambs	a) 2986 treatment lambs	
		b) Norwegian fur bearing breed (60 kg)		b) Lambs	b) 681 treatment lambs	
		c) Rygja breed (75-80 kg)	c) Lambs	c) 428 treatment lambs		
Enclosure	Bauer et al. ³⁵	Improved enclosures (clay construction)	Lion (<i>Panthera leo</i>) and spotted hyena (<i>Crocuta crocuta</i>)	Cattle and shoats	2 areas with treatment and control enclosures	2 years
	Kolowski & Holekamp ²⁸	Use of pole boma vs. bush boma	a) Spotted hyena (<i>Crocuta crocuta</i>) b) Leopard (<i>Panthera pardus</i>)	Sheep and goats	40 treatment boma 44 control boma	14 months

Lichtenfeld et al. ³⁴	Fortified boma (living wall)	Lion (<i>Panthera leo</i>)	Livestock	62 treatment boma 84 control boma	9296 boma months/ 10 years
Mazzolli et al. ³³	Night corrals	Mountain lion (<i>Puma concolor</i>)	Sheep and swine	5 treatment farms 19 control farms	3 years
Rigg et al. ³²	Night barn (always or sometimes) with pasture as control	a) Brown bear (<i>Ursus arctos</i>) b) Wolf (<i>Canis lupus</i>)	Sheep	52 treatment farms 106 control farms	3 years
Woodroffe et al. ²³	Transparency of boma wall	a) Lion (<i>Panthera leo</i>), leopard (<i>Panthera pardus</i>), and spotted hyena (<i>Crocuta crocuta</i>)	a) Cattle, sheep, goats, camels, and donkeys	a) 178 matched bomas (treatment + control)	4.5 years

			b) Spotted hyena (<i>Crocuta crocuta</i>)	b) Sheep and goats	b) 95 matched bomas (treatment + control)	
Guarding	Iliopoulos et al. ³⁶	Herders vs. non-predator proof fence (damage claims for attacked herds)	Wolf (<i>Canis lupus</i>)	Sheep and goats	181 treatment 7 control	21 months
	Palmer et al. ²⁴	Herders	Coyote (<i>Canis latrans</i>), cougar (<i>Puma concolor</i>), and black bear (<i>Ursus americanus</i>)	Lambs	5 treatment herds 4 control herds (5 herds, 1-2 years)	4 months
	Woodroffe et al. ²³	Number of men	a) Lion (<i>Panthera leo</i>), leopard (<i>Panthera pardus</i>), and spotted hyena (<i>Crocuta crocuta</i>) b) Lion (<i>Panthera leo</i>)	a) Cattle, sheep, goats, camels, and donkeys b) Cattle	a) 178 matched bomas (treatment + control) b) 31 matched bomas (treatment + control)	4.5 years

Livestock guarding dog	Andelt ²⁵	Livestock guarding dog in a) fenced pastures b) open range pastures	Coyote (<i>Canis latrans</i>)	a1) Lambs	a1) 6 treatment, 73 control	1 year
				a2) Ewes	a2) 7 treatment, 78 control	
				b1) Lambs	b1) 10 treatment, 20 control	
				b2) Ewes	b2) 10 treatment, 20 control	
	Gehring et al. ¹³	Livestock guarding dog	Coyote (<i>Canis latrans</i>)	Cattle	6 treatment farms, 3 control farms	3 years
	Palmer et al. ²⁴	Livestock guarding dog	Coyote (<i>Canis latrans</i>), cougar (<i>Puma concolor</i>), and black bear (<i>Ursus americanus</i>)	Lambs	1 treatment herd 8 control herds (5 herds, 1-2 years)	4 months
	Rigg et al. ³²	Livestock guarding dog	Wolf (<i>Canis lupus</i>) and brown bear (<i>Ursus arctos</i>)	Sheep	14 treatment flocks 45 control flocks	4 years

	Woodroffe et al. ²³	Domestic dog present in boma	Lion (<i>Panthera leo</i>), leopard (<i>Panthera pardus</i>), and spotted hyena (<i>Crocuta crocuta</i>)	Cattle, sheep, goats, camels, and donkeys	178 matched bomas (treatment + control)	4.5 years
Predator removal	Bradley et al. ³⁹	Trapping and euthanizing, ground shooting, aerial gunning, translocation in response to attack. Partial- or full pack removal (with time after first attack). a) partial <7 days b) partial <14 days c) partial >14 days d) full pack removal	Wolf (<i>Canis lupus</i>)	Sheep, cattle, and other	326 partial removal 48 full pack removal 593 control	1850 days
	Blejwas et al. ²⁷	Removal of breeding pair (toxin or shooting)	Coyote (<i>Canis latrans</i>)	a) Lambs b) Ewes	a) 14 territories (after + before) b) 20 territories (after + before)	2.8 years

	Harper et al. ³⁷	a) Trapping of any individual b) Trapping of adult male	Wolf (<i>Canis lupus</i>)	Cattle, turkey, and sheep	923 verified depredations	20 years
	Wagner & Conover ³⁸	Aerial hunting before grazing season	Coyote (<i>Canis latrans</i>)	Lambs	21 paired pastures (treatment + control)	3-6 months
Shock collar	Hawley et al. ⁴⁰	Shock collar	Wolf (<i>Canis lupus</i>)	Bait	5 treatment wolves 5 control wolves	28 days
Sterilization	Bromley & Gese ⁴¹	Sterilization of carnivore	Coyote (<i>Canis latrans</i>)	Lambs	4 treatment packs 8 control packs (1999)	5-23 days
Visual/ Auditory deterrent	Davidson-Nelson & Gehring ²⁹	Fladry	a) Wolf (<i>Canis lupus</i>) b) Coyote (<i>Canis latrans</i>)	Sheep and cattle	4 treatment farms 4 control farms	75 days

Lance et al. ¹⁴	Electrical fladry	Wolf (<i>Canis lupus</i>)	Cattle	6 treatment pastures 6 control pastures	Treatment: 20 days, control: 29 days
Musiani et al. ⁴²	Fladry	Wolf (<i>Canis lupus</i>)	Cattle and bait	2 pastures (treatment + before)	60 days
Woodroffe et al. ²³	Number of scarecrows	a) Lion (<i>Panthera leo</i>), leopard (<i>Panthera pardus</i>), and spotted hyena (<i>Crocuta crocuta</i>) b) Leopard (<i>Panthera pardus</i>)	a) Cattle, sheep, goats, camels, and donkeys b) Sheep and goats	a) 178 matched bomas (treatment + control) b) 35 matched bomas (treatment + control)	4.5 years

Zarco-González & Monroy-Vilchis ¹⁵	Auditory and visual deterrents	Puma (<i>Puma concolor</i>), and jaguar (<i>Panthera onca</i>)	a) Cattle b) Goats	2 treatment farms 1 control farm	2 months
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