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## Predator control should not be a shot in the dark

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Predator control should not be a shot in the dark

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Posted By Liza Lester on Sep 7, 2016 | 0 comments

Although the protection of livestock from predators like wolves, cougars, and bears is hotly contested in the United States and Europe, control methods are rarely subjected to rigorous scientific testing. Non-lethal methods face higher standards of evidence—and are also generally more effective than killing predators, say Adrian Teves, Miha Krofel and Jeannine McManus. The trio conducted a systematic review of the available evidence. Their report “Predator control should not be a shot in the dark” appears in the September 2016 issue of *Frontiers in Ecology and the Environment*.

Text and animated audio slides produced by [Adrian Treves](#), professor of Environmental Studies at the University of Wisconsin-Madison.

### Predator control should not be a shot

Adrian Treves, Ph.D.  
Miha Krofel, Ph.D.  
Jeannine McManus, M.Sc.

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published in [Frontiers in Ecology and the Environment](#)

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<http://faculty.nelson.wisc.edu/treves/>



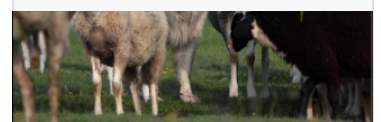
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Transcript:

Every year governments and private citizens kill thousands of bears, cougars, coyotes across North America and Europe. Governments usually kill these predators in hopes of preventing predation on domestic animals. Criticisms of predator control programs include concerns about ecological side-effects, inhumane treatment, and functional effectiveness of the methods.

We evaluated scientific evidence for the functional effectiveness of lethal methods and non-lethal methods to prevent predation on livestock. Adopting standards from clinical trials in biomedical research, we reviewed evidence from “gold standard” and “silver standard” experiments. Gold standard experiments use random assignment of livestock to treatment or placebo (control). Silver standard tests offer weaker scientific inference because they are before-and-after comparisons.

Twelve experiments since 1978 met the criteria. Five were European, seven were North



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Twelve experiments since 2010 met the criteria. Five were European, seven were North American, but 12 additional North American experiments with flawed designs had to be set aside. Only 2 experiments met the “gold” standard. One tested livestock-guarding dogs that bond to livestock not humans — like me. And one experiment tested a visual deterrent against wolves. A greater number of non-lethal methods than lethal methods were effective. All the experiments on lethal methods were “silver” standard and 71% detected no preventive effects or counter-productive effects of losing more livestock.

Most predator control methods have never been tested experimentally using accepted standards of evidence. We need more “gold” standard experiments, especially for lethal methods because the majority of methods appeared to waste time, resources, and threaten the lives of predators and livestock needlessly. To reduce waste and provide the best available science to livestock owners and taxpayers, we recommend suspension of lethal methods until “gold” standard experiments are completed by independent scientists.

Adrian Treves, Miha Krofel, and Jeannine McMannus (2016) Predator control should not be a shot in the dark. *Front Ecol Environ* 14(7):380–388, doi:[10.1002/fee.1312](https://doi.org/10.1002/fee.1312)



A livestock-guarding dog protects sheep from camera-wielding ecologists. Dogs are also effective against wolves and coyotes. From figure 3 of Treves et al 2016.



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ESA's Communications Officer came on board in the fall of 2011 after a Mass Media Science and Engineering fellowship with AAAS and a doctorate in Molecular and Cellular Biology at the University of Washington.

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