

Are LGDs a viable tool for preventing damages in open range livestock? A case study from Portugal

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Abstract

The Iberian wolf (*Canis lupus signatus*) nucleus south of the Douro River is expanding, impacting on the open range livestock and raising conflicts with the local communities. Being strictly protected by national and international laws, the need to find viable solutions to mitigate such conflicts is urgent and challenging. Changes in husbandry and the use of prevention measures that take into consideration the wolf presence are proposed associated with damage compensation. During the LIFE MedWolf Project (LIFE11NAT/IT/069), from 2012 to 2017, 31 LGDs were donated and monitored in Portugal. Dogs were evaluated according to: i) behavior - 20' observations during grazing and owner ratings; ii) damage levels (official records) - BACI design and comparisons with control and nearby holdings (within 10 km based on average radius pack territory); iii) farmer satisfaction - inquiries. Considering mortality and minimum evaluation age (18 months) 20 dogs were included in the behavioral and satisfaction analysis. For the damage analysis, one monitoring year had to be considered after the dogs reached adulthood, and 12 dogs were included. Results show an overall reduction of >60% in the level of damage. Most dogs were evaluated as excellent/good in attentiveness (55%), trustworthiness (85%), and protectiveness (65%), and farmers rated most dogs (70%) with an excellent/good performance. Most (75%) were also satisfied/very satisfied with their dogs. Less suitable raising conditions, lower experience of farmers and reduced supervision during early development correlated with lower performance. Best practices are proposed to optimize the implementation of LGDs and reduce the constraints identified.

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