

# **The conservation of the Iberian wolf in Portugal: the use of new and traditional techniques for damage prevention on livestock**

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## **Abstract**

Different techniques were traditionally developed by shepherds to reduce the predatory impact on livestock. Some of these preventive techniques of livestock protection are being revived in the last decades under the large carnivores' conservation strategies worldwide. One of the most widespread is the use of Livestock Guarding Dogs (LGDs), which is being implemented with good results. In Portugal, three autochthonous breeds of LGDs were selected to protect livestock from predators, but their use was progressively abandoned in the last decades due to socio-economical reasons and the decrease of predators - the Iberian wolf. Originally distributed throughout the country, it is now restricted to the northern region and is facing extinction. This situation is also endangering the LGD breeds due to bottleneck effects and the diverging of selection pressures from working to the show rings. Integrated in the Signatus Project - a conservation strategy for the Iberian wolf elaborated by Grupo Lobo - a research line was initiated in 1996 to implement practical conservation measures for the wolf in Portugal. The first action was to contribute to the recovery of the use of LGD breeds in Portugal and thus reduce the conflicts between man and wolf. Several dogs were placed in flocks, their behavioural development was regularly monitored and their efficiency evaluated. This method has proved to be effective in the reduction of predation, for a correct evaluation should also consider a behavioural analysis of the dog, since the criteria of the amount of damages prior and after the introduction of the dog, is influenced by several factors difficult to assess, like fluctuations on predators' density, availability of alternative preys, changing of the environment conditions affecting the efficiency of the attacks. Nevertheless, there are some limitations to the use of LGDs and several conditions must be met for the dog to become an efficient guardian: gregarious livestock, adequate socialization with the animals to be protected and over a year is necessary before knowing if the dog is going to work, since the dog is not fully effective until reaching adulthood. Also, raising a LGD requires a great effort by an inexperienced shepherd. Taking this into account, a new project has been initiated to develop alternatives methods to the use of LGD, namely electric fences and test the efficiency of other traditional methods. Preliminary inquiries on traditional techniques of livestock protection conducted in Central Portugal lead to interesting findings on the use of different light-mobile barriers, including fladry, to protect sheep flocks kept in small enclosures overnight. This technique was used in Eastern Europe for hunting wolves. Although recent testing on the long-term efficiency of fladry to protect livestock from wolf predation in natural environments is still underway, its use by Portuguese shepherds until 1950 at least, seems to increase the trust on the use of this technique. The conservation of large carnivores necessarily requires the integration of different strategies, involving new and traditional preventive methods of livestock predation that best complement and adapt to each situation.

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