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LIVESTOCK GUARDING DOGS AS A TOOL FOR MANAGING HUMAN–CARNIVORE CONFLICTS

INTRODUCTION

In Italy, the recent expansion of wolf populations represents a serious challenge for managing human-carnivore conflicts.
Livestock depredation is one of the most prevalent causes of antagonism. Sheep is the species most preyed upon by wolves, followed by cattle and goats.
Livestock guarding dogs (LGDs) are considered one of the most powerful prevention tools against carnivore depredation on livestock.

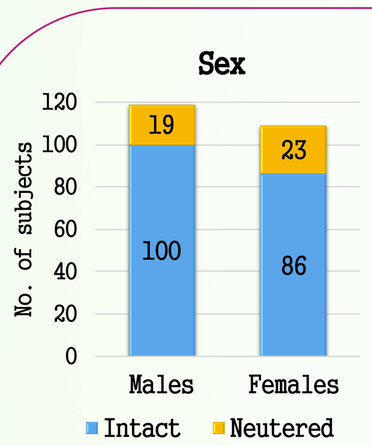
AIM OF THE STUDY

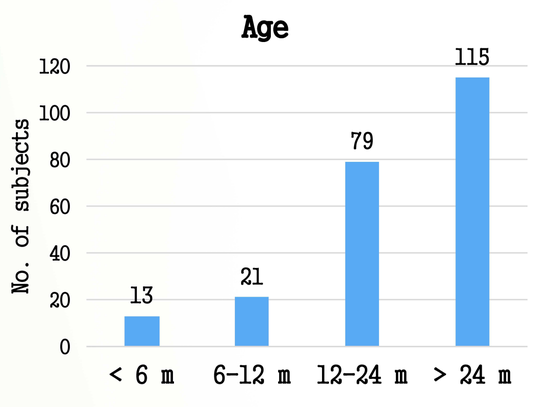
To acquire information on the use of LGDs, focusing on signalment, health, management and behaviour of dogs and collecting information on their efficacy in preventing livestock depredation.

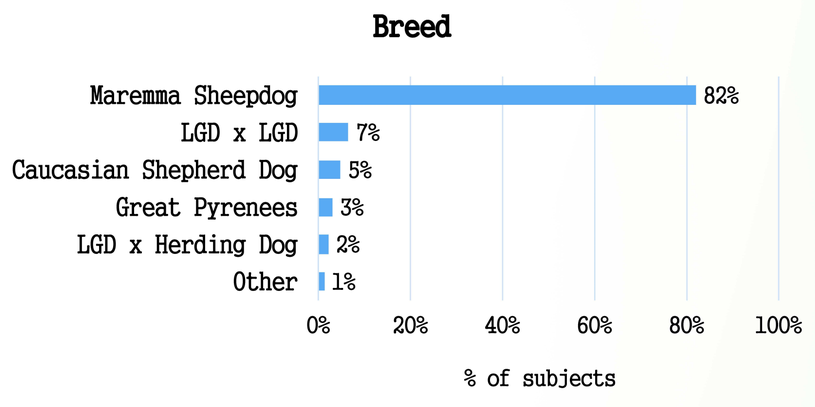
MATERIALS AND METHODS

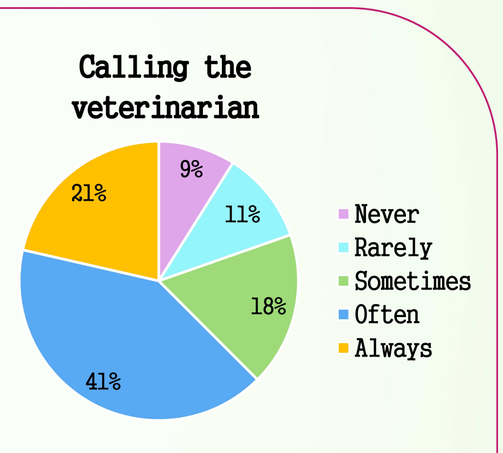
Data were collected by interviewing farmers that have been using LGDs for at least 1 year, therefore information takes on the form of a testimonial.
56 sheep and goat farms of the Tuscan Emilian Apennine area were included, for a total of 228 LGDs.

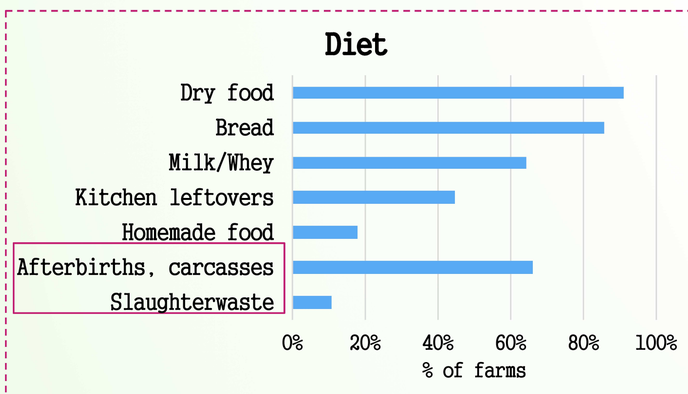
RESULTS AND DISCUSSION



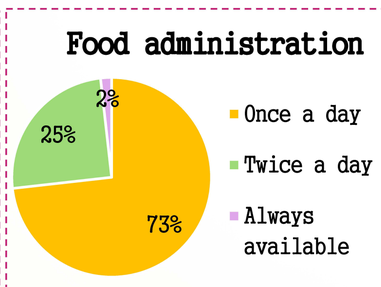




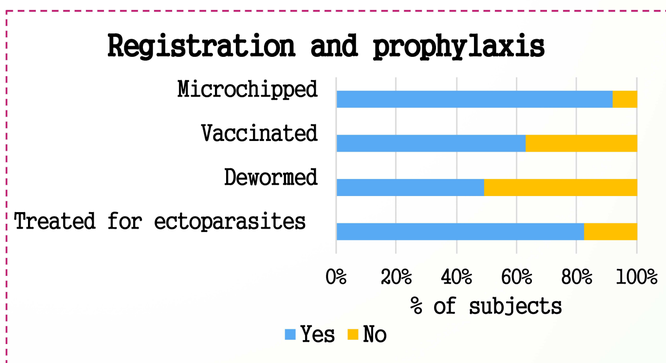




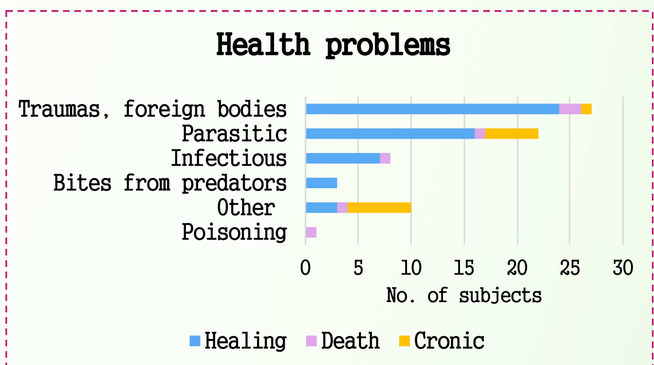
Access to afterbirths and carcasses increases the risk of transmission of *Echinococcus granulosus*.
Faecal sampling revealed a high prevalence of Cestodes [data not shown].



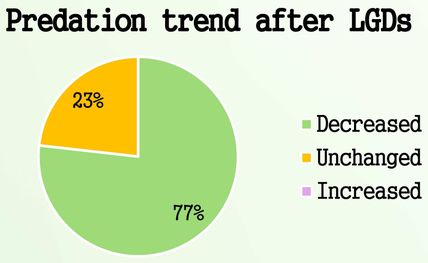
Prolonged fasting is not good for working dogs welfare.
Feeding dogs once a day increases risk of Gastric Dilatation-Volvulus (GDV) Syndrome.

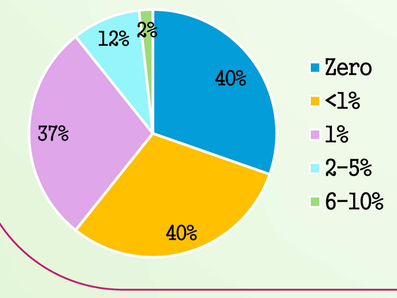


The high percentage of microchipped and vaccinated dogs may be due to the assistance activities carried out as part of various projects for the prevention of livestock depredation that provided LGDs to many farmers.



The most frequent health problems were traumas, such as bites from other dogs. The most recurring parasitic diseases were scab and leishmaniosis. Other illnesses included lameness, GDV, food allergy, dystocia, mastitis.

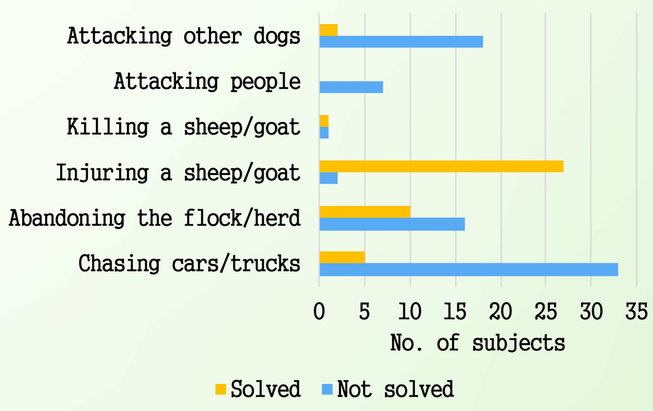




All farmers were satisfied with their LGDs' work. LGDs succeeded in decreasing livestock depredations by 50% up to 100% or kept them unchanged with rates that in very few cases exceeded 1%.
In 40% of farms predation events were reduced to zero.

The decrease of predation rates did not seem to be related to the use of other methods of control (e.g. fencing) or to the number of livestock per LGD, which was quite variable between farms.

Behavioural problems were mostly due to negligence during the dogs' socialization period and, more generally, to training errors. Car chasing represents a significant as well as frequent example of this.
Aggressiveness towards other dogs or people was reported in 11% of LGDs.
The occurrence of dogs injuring livestock mainly happened when they were puppies due to an excess of playing behaviour and it usually resolved as the dog grew up.
Similarly, abandoning the flock mainly occurred in subjects less than 2 years old, age at which a LGD is considered fully mature and efficient.



CONCLUSION

LGDs proved to be effective in protecting livestock against carnivore depredations. However, external factors such as stocking rates, predator densities and initial level of predation, which have all been found to impact farmer-predator conflict, were often unknown. LGDs need around 2 years to reach adulthood and become efficient guard dogs. Therefore, farmers should be encouraged to be prepared in advance, especially in areas where increases in predator population size is expected. Illness can reduce the success of working dogs. Furthermore, if not properly vaccinated or dewormed, they can spread diseases to other dogs, endangered wildlife, livestock and humans.