

# Handbook of livestock protection against wolf attacks

## Summary

Nowak S., Mysłajek R. W. 2006. Poradnik ochrony zwierząt hodowlanych przed wilkami [Handbook of livestock protection against wolf attacks]. Stowarzyszenie dla Natury WILK, Twardorzeczka, 55 pp.

We recommend the introduction of a 7-8 week-old male TMSD pup into a sheep flock or cattle herd. The best moment is early winter, to give the pup enough time to grow before the start of the next grazing season. From the beginning, the pup should stay in its own safe pen inside the sheep or cattle stable, to allow the proper development of bonds between the TMSD and livestock. All pup activities such as feeding, examination by the vet, and releasing for walks, should take place amongst livestock under the supervision of the shepherd. We advise avoiding too much close contact between the breeder and the pup so as not to disturb the process of socialisation with the livestock. After seven months of growing amongst the flock, the young TMSD should voluntarily stay with the sheep on a pasture. The gentle supervision of a human is still necessary to avoid possible conflicts with adult livestock and prevent the dog from developing undesirable habits. During the next few months the TMSD will become more effective as a livestock guarding dog, but it will not reach its full efficiency until it is 1.5 years old. For bigger flocks or herds, more than one TMSD is necessary. The next pups should be introduced after the first dog is grown up.

Based on our experience we recommend making fladry from thin, red fabric, which was used traditionally for flag production, and strong, thin rope. Strips of cloth should be 55 cm long and 10 cm wide, and must be well sewn to the string with a distance of 40 cm between each flag. The rope should then be wound onto a light hoist to enable easy operation. Fladry should be installed on sticks around the pasture or animal pen. The ends of the red strips should hang about 20 cm above the ground, to allow the wind to move them constantly. For the same reason, sticks should be placed outside a pen or fence, at a distance of at least 1.5 m. The beginning and end of the fladry must be joined to create a rectangle or circle. The fladry should not be placed in a straight or polyline along a forest, because wolves will simply follow the line to find its end.

Fladry, due to their ease of installation, are very useful to prevent additional damage when a wolf attack has just occurred. Fladry can also be a good solution when the flock consists of a few sheep or goats and there is no economic reason to introduce a guarding dog. But this method can be used even for big herds of cattle or sheep flocks, if combined with electric fence and/or guarding dogs. Fladry are likely to be more efficient when the livestock pen is moved every few days to a new part of the pasture, as this causes changes in the environment and prevents habituation of wolves to the fladry. Such practice is common in the Carpathian Mountains and helps to protect and fertilize grass.

Furthermore, we discuss and recommend other types of fence, including electric fence and combinations of electric fence, high metal net and barbed wire as livestock protection.

Finally, we mention other methods used throughout the world, such as donkeys, lamas, and aversive conditioning and frightening devices, to inspire our farmers with new solutions.