

# Wolf depredation on livestock in Lithuania in 2019 – 2021

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## Introduction

The strongest factor determining the conflict between humans and wolves is the damage of wolves done to livestock (1167 animals were killed in 2019, 1279 animals were killed in 2020, 479 animals were killed until September 1st, 2021).

Research shows that the frequency of depredation relates to the abundance and availability of livestock, which is determined by the farming method and time of year. The specie of livestock mostly attacked depends on the abundance of the specie. In countries that are mostly oriented towards sheep-farming – wolves mostly attack sheep, whereas in territories that are high in number of other livestock – frequently, or in some cases even dominantly, cattle and calves were attacked.

## Methodology

The patterns of damage done to livestock were investigated while using data registered in the Biological Diversity Database of the State Service for Protected Areas under the Ministry of Environment. The factors for choosing data from this particular database are as such: the data is sufficiently comprehensive, the exact location of the case is marked, photos proving the case are attached. Data registered from January 1st, 2019 was analysed. During the analysed period – 974 cases of wolves attacking livestock were registered. 383 cases were registered in 2019, 445 cases registered in 2020 and 146 cases were registered until September 1st, 2021.

## Results

During the 3 years that are being analysed wolves most frequently (60.3% - 67.4% of cases annually) attacked sheep. When counting killed individuals – sheep take an even bigger portion of all killed animals by wolves (72.9% - 84.2% of total animals killed annually).

As a rule, attacks on livestock were not evenly spread throughout the whole year. Most frequently animals were attacked in September (22.2% of all attack cases), October (19.2%) and August (18.4%). However, a significant increase in such cases was visible from May. During the whole grazing period sheep attacks were 2-5 times more frequent than attacks on other livestock.

During recent years the formation of several „hot-spots“ is being seen. Damage cases are more frequent in those „hot-spots“ (pic. 1). This further shows the classical wolf behaviour – particular individuals or families of wolves specialize in their hunts.



Pic. 1. The distribution of damage done by wolves to livestock in Lithuanian territory. 2019, 2020, 2021 (until September 1st, 2021). Kernel density analysis

It is noticed that, if the animals are not kept in a herd – no protection against wolves is taken. If the animals are kept in a herd – usually they're surrounded by a single-thread electrical fence, in singular cases – an electric net fence. The typical electric fence prevents herd animals from scattering, however, it is not an effective tool for keeping wolves outside of the territory. It is counterproductive to declare such tools as electric fences as effective ways of keeping wolves away from livestock. Farms, which conduct commercial activities and receive income from farm animals should be obliged to use protection tools and methods that are proven to be effective and which ensure the safety of livestock.

Lithuania allows taking out wolf individuals out of the wild, even not during wolf hunting season. Such practice has both pros and cons. The first step should be improving the method, by which the approval of taking out a wolf out of the wild not during hunting season is given out. The procedure itself is cumbersome, responsible municipal employees between various institutions and committees are not sure of the procedure, due to this the process becomes much longer. This makes getting approval a very long process, whereas the approval should be as fast as possible once the necessary conditions are met - this would ensure best results. As a tool hunting an individual is effective only if it's done immediately after the killing of livestock as well as in the place where the attack took place (or not further than 7 km from the attack location).

## Main conclusions

The two main ways of improving the situation are as such: deploying effective farm animal protection tools and methods; taking out wolves that have formed an unwanted behavioural model out of the wild.