

ABSTRACT

Despite its long tradition in our country, livestock grazing almost disappeared from Czech landscape. This form of land use has wended down in the middle of 20th century, when compulsory co-operative farming was introduced. Decrease of pasturage is especially visible on fragmented areas of steep slopes and in dry places. These areas are often highly valuable and protected for its nature richness. When a grazing management is introduced, its effects on plant species communities are not clear. Also the exact mechanisms of vegetation changes caused by grazing are often unknown.

In 2005, administration of PLA Český kras reinstated grazing management as a mean of preservation of dry grassland ecosystems. As part of this project I studied, how generative regeneration contributes to vegetation changes. The aim of the present study is to ascertain:

- a) how is seedling recruitment and survival affected by grazing,
- b) what are limitations of generative reproduction, and
- c) what is the contribution of soil seed bank to vegetation changes. In 2005, monitoring of seedling recruitment and survival had started, repetitive sowing experiment was performed and species composition of persistent seed bank was analyzed.

Grazing had a positive effect on seedling – both numbers of seedling and their species composition. Seedling establishment was not significantly affected by grazing. Seedlings on grazed plots had faster turnover than seedlings in control plots. Generative reproduction on studied locality was limited by distribution of suitable microsites and by seedlings survival. Limitation by seed availability was ruled out. Seedling dynamic was also significantly affected by weather conditions and spatial heterogeneity of the locality. Persistent seed bank doesn't hold any potential for regeneration of species diversity of studied locality.

Even though the influence of grazing on seedling recruitment was visible from the beginning of management, significant changes of vegetation composition haven't been documented yet. I recommend repeating of presented experiments in time, when the impact of grazing on vegetation is fully proven.