

Abstract

Meadows, as an integral part of the Giant Mountains, depend on regular management, without it they can get degraded. The aim of this thesis was to evaluate the impact of different types of management (mulching, mowing with or without fertilization) on change in coverage, biomass and establishment of plants. The experiment took place in years 1997-2011 on the site called Sněžné Domky in Giant Mountains on 3 sites which differ in humidity and trophy. The effect of management on **vegetation change** was statistically conclusive. Mulching was preferred the most by *Geranium sylvaticum*, mulching and fertilization was preferred especially by these species: *Holcus mollis*, *Alopecurus pratensis* and *Crepis conyzifolia*. Mulching and no fertilization: *Achillea millefolium*. *Avenella flexuosa* preferred particularly mowing. Mowing and fertilization was preferred by *Festuca rubra*, *Luzula luzuloides*, *Anthoxanthum odoratum*, *Agrostis capillaris*, *Veronica officinalis* and *Hieracium lachenalii*. Mowing without fertilization was preferred by *Potentilla erecta*. The effect of management on the **amount of biomass** appeared statistically inconclusive (except for amount of old biomass). Biomass is more correlated by the weather and the trophy of the site than the type of management. The effect of management on **establishment of plant** species *Campanula rotundifolia*, *Luzula luzuloides*, *Leontodon autumnalis*, *Silene dioica* and *Silene vulgaris* was statistically inconclusive for all areas together (separately for each area was the effect conclusive except for one site - dolní bližší plocha). Species that have been supported by 15 years of mowing experiment were also supported in establishment of plants. The same was true for mulching. Mulching is not a suitable method for long-term management of Giant meadow in an effort to maintain species-rich habitats.

Keywords: Mulching, mowing, fertilization, diversity, biomass, establishment of plants, Giant Mountains meadow, Sněžné Domky.