

Utility value of grasslands in a legally protected area depending on the management

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Introduction

Active protection of meadow communities in national parks is an important element of maintaining their ecosystem functions. The succession of invasive species is particularly visible in areas where traditional extensive management has been ceased. Recent years have increasingly seen the introduction of free-range grazing (among them the primitive breeds like Polish primitive horses – Koniks) in areas of high natural value.

Methods

Place: Biebrza National Park (BNP, situated in north-eastern Poland)
Time: 2010-2011

Measurements: the sward cover (%), plant height (cm), analysis of the botanical composition of the sward, fresh and dry mass yield

Objects:

I – non-mowed
 (the last cutting seven years before the research)

✗ mowing
 ✗ grazing



II – mowed every 2-4 years
 (the last mowing 4 years before the research)

✓ mowing
 ✗ grazing



III – mowed once a year and grazed by Konik horses
 (0.55 LU ha⁻¹ began in 2005)

✓ mowing
 ✓ grazing



Results

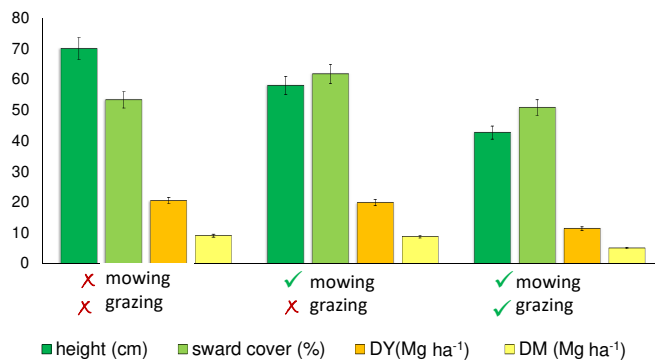


Figure 1. Height and cover of sward, disposable yield of fresh mass (DY) and dry mass yield (DM) of investigated parts of the meadow

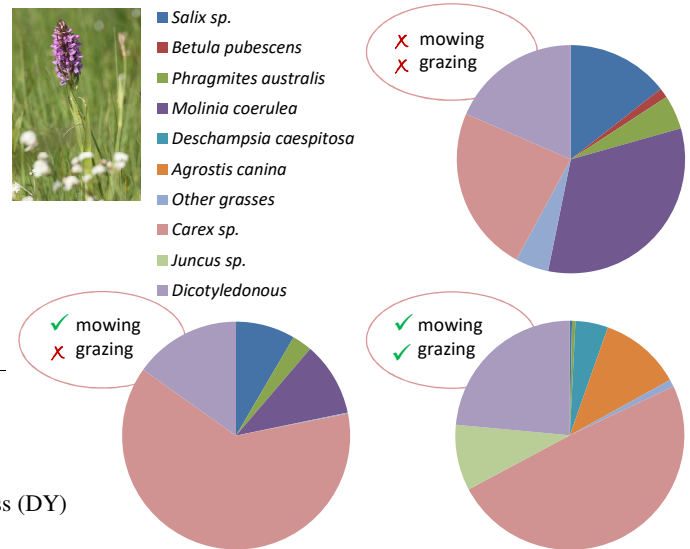


Figure 2. Botanical composition of sward (%) on assessed parts of the meadow

Conclusions

- The management method significantly affected the grassland vegetation and yields on the studied area
- All parts of the meadow clearly differed in the cover and height of the sward
- Floristic composition of the patches of non-mowed and mowed every 2-4 years parts of the meadow was similar, but clearly differed in the proportion of some species or groups of species
- The presence of *Salix* sp. and *Betula* sp. proves initiation of the succession on non-mowed meadow
- Regardless of the management, the sward of all grass communities was characterized by low nutritional value

