

Agronomic characteristics of a lowland and a mountain hay meadow under different cutting regimes



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Aim

Hay meadows managed under agri-environmental scheme agreements

- Evaluation of loss of yield and forage quality compared to grassland managed without restrictions (conventional)



Material

Three experimental sites

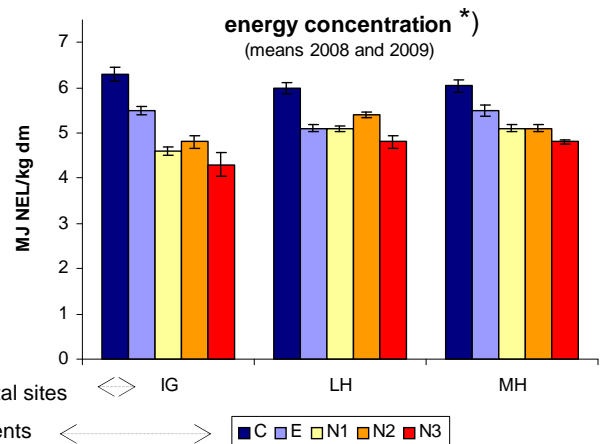
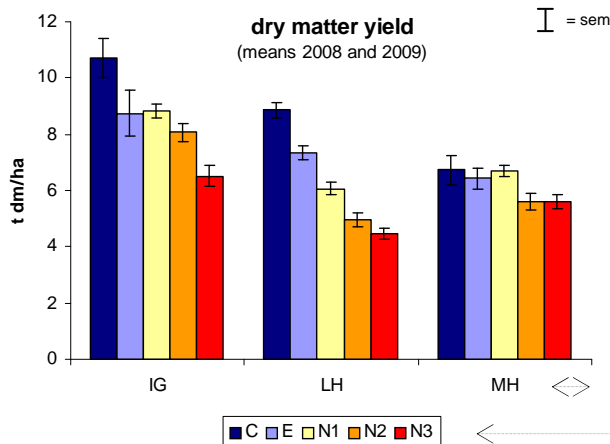
- LH** Lowland hay meadow
72 % monocots / 28 % dicots; 20 species / 24 m²
- MH** Mountain hay meadow
73 % monocots / 27 % dicots; 25 species / 24 m²
- IG** Agriculturally improved grassland
96 % monocots / 4 % dicots; 14 species / 24 m²

Methods

Treatments (four replications)

- E** Reduced N input (3 cuts, 100 kg N org)
- N1** N after first cut (> 01.06., 2 cuts, 60 kg N)
- N2** Late first cut (> 15.06., 2 cuts, 0 kg N)
- N3** Very late first cut (>15.07., 2 cuts, 0 kg N)
- C** Conventional (4 / 3 cuts, 180 / 100 kg N)*

* LH/IG: 4 cuts, 180 kg N, MH: 3 cuts, 100 kg N



*) = first cut

Conclusions

- The impact of delayed cut and omission of N-fertilization on the reduction of dry matter yield is more pronounced on the species-rich lowland hay meadow compared to the agriculturally improved grassland
- In contrast, the reduction in energy concentration due to delayed cut is less pronounced on the lowland hay meadow compared to the improved grassland as dicots maintain their digestibility better than grasses
- Even if the income loss due to management agreements is compensated by a premium, it is challenging to integrate forages of very late cuts into livestock feeding systems