Reconciling meat production and biodiversity conservation on marginal pastures

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Background and motivation
Research questions of EG4BM
(Extensive Grazing for Biodiversity conservation and Meat production)

1. How does shrub encroachment affect vegetation?

2. How does shrub encroachment respond to grazing and how does it affect animal performance?
Effects of shrubs on plant diversity

Green alder (*Alnus viridis*)

Creeping pine (*Pinus mugo*)

Number of plant species (4m²)

Shrub cover (%)
Grazing experiment 2015/16

Alnus: none low medium high

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Biomass production 2015

*Alnus viridis* understorey

- Fertile pastures
- Nitrophilous vegetation
- Nutrient-poor pastures
- Sedge-dominated pastures

In addition, up to 3.8 t/ha in the form of leaves

Wiedmer and Senn, 2006
No significant differences in meat quality parameters driploss, cookloss and shearforce for *Biceps femoris* and *Longissimus thoracis* in cattle and lambs.
Conclusions

- Plant species richness along shrub cover gradients is depending on the dominant shrub species.
- The expansion of *Alnus viridis* seriously affects plant diversity.
- *Alnus viridis* and its understorey vegetation provide a substantial forage resource for animals.
- Performance of the animals and meat quality was equal if not higher on sites with *Alnus viridis* than on open pastures.
- Conservation targets can basically be reconciled with a viable animal productivity using adapted robust breeds.
Thank you for your attention