

Effect of sheep grazing on ramet performance of Bilberry (*Vaccinium myrtillus* L.)

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The clonal deciduous perennial Bilberry is a valuable food for a range of herbivores. Bilberry is reported to be tolerant of herbivory. But the effect of natural damage on individual ramets has been poorly described. The aim here was to study the vegetative and reproductive performance of ramets subjected to different grazing pressures by sheep during the previous growing season.

In order to understand the growth responses which effect the recovery from herbivory, studies had the following objectives.

1. Determination of the ability of activation of dormant buds through a study of bud demography.
2. Qualitative and quantitative comparison of the growth responses of ramets.
3. Describe the pattern of biomass investment in the above ground parts.

Results:

1. The proportion of activated dormant buds did not significantly increase with grazing pressure
2. Branching ratio was significantly decreased with grazing pressure. But the length of current shoots, leaf size and the number/shoot remained almost same irrespective of treatments. Flowering and fruiting were significantly decreased by grazing and un-grazed ramets had significant greater flowering. The proportion of dead material in ramets significantly increased with grazing pressure.
3. Biomass investment in current growth was also affected with grazing pressure although the dry weight per shoot, leaf weight and weight per unit area of leaf remained the same.

Conclusion: Bilberry ramets are vulnerable to sheep grazing and show less recovery in the following growing season.

* activation of buds - people do not add - they require more (for more and then...)

* Is it individual loss? resources depleted? compares production pressure. See that makes for buds to activate. Think

7. bud heavy - mortality of ~~shoot~~ part

notes:

Suggestions - Anne Johnson - not shoot ratio in field
look at last year's growth and proportion
it to that not all that

Seedlings observed in Finland - Boreal forest - detailed list in file

References for big natural in forests - Swedish (the 05) poster