

Supplementary material

Appendix 1. Forage biomass: habitat parameters influencing total plant biomass (oven-dried g m⁻²).

Habitat parameter	F	DF	p	Direction
Winter				
Landscape type	34.443	1,18	<0.001	Open land top10 ^a > forest top10
Habitat type (with forest)	6.952	3,73	<0.001	Lowland/alpine meadows/pastures > forest top10
Slope open land	4.929	1,62	0.030	Steep > flat
Spring				
Landscape type	677.246	1,18	<0.001	Open land top10 > forest top10
Habitat type (with forest)	8.705	3,73	<0.001	Lowland/alpine meadows > forest top10
Habitat type (only open land types)	4.201	2,62	0.019	Valley bottom meadows > alpine meadows
Summer				
Landscape type	88.107	1,18	<0.001	Open land top10 > forest top10
Habitat type (with forest)	7.197	3,73	<0.001	Alpine meadows > forest top10
Habitat type (only open land types)	3.976	2,62	0.024	Alpine meadows/pastures > valley bottom meadows

^atop10: 10 highest values were selected for comparison.

Appendix 2. Forage quality I: habitat parameters influencing crude protein content (g crude protein/100 g dry matter).

Habitat parameter	F	DF	p	Direction
Winter				
Landscape type	8.392	1,58	0.005	Open land top30 ^a > forest top30
Habitat type (with forest)	37.384	3,93	<0.001	Valley bottom meadows > forest top30 Forest top30 > alpine meadows/pastures
Habitat type (only open land types)	18.366	2,62	<0.001	Valley bottom meadows > alpine meadows/pastures
Altitude open land	29.509	1,65	<0.001	Low > high
Slope open land	7.032	1,62	0.010	Flat > steep
Spring				
Landscape type	13.598	1,58	0.001	Forest top30 > open land top30
Habitat type (with forest)	33.415	3,93	<0.001	Forest top30 > lowland/alpine meadows/pastures
Habitat type (only open land types)	11.510	2,62	<0.001	Alpine pastures > lowland/alpine meadows
Aspect open land	8.869	1,62	0.004	North > south
Summer				
Habitat type (with forest)	16.787	3,93	<0.001	Forest top30 > alpine meadows/pastures
Slope open land	5.607	1,62	0.021	Flat > steep

^atop30: 30 highest values were selected for comparison.

Appendix 3. Forage quality II: habitat parameters influencing biomass of plant groups in forest.

Habitat parameter	Plant group	Protein ^a	F	DF	p	Direction
Winter						
Forest type	Herbs	high	5.101	2,55	0.009	Maple > spruce dominated
	Dwarf-shrubs	low	3.595	2,55	0.034	Spruce > maple dominated
	Deciduous leaves	low	12.608	2,55	<0.001	Beech > spruce dominated
Altitude	Grasses	low	5.439	1,61	0.023	High > low
	Tall herbs	high	4.311	1,61	0.042	High > low
	Deciduous leaves	low	19.349	1,61	<0.001	Low > high
	Needle shoots	low	5.108	1,61	0.027	High > low
Spring						
Forest type	Tall herbs	high	5.516	2,57	0.006	Maple > beech dominated
	Dwarf-shrubs	low	5.935	2,57	0.005	Spruce > beech/maple dominated
	Deciduous leaves	low	11.048	2,57	<0.001	Beech > spruce dominated
Altitude	Grasses	low	4.258	1,63	0.043	High > low
	Tall herbs	high	35.623	1,63	<0.001	High > low
	Mosses	low	9.876	1,62	0.003	Low > high
	Deciduous leaves	high	16.975	1,63	<0.001	Low > high
	Needle shoots	low	4.931	1,63	0.030	High > low
Aspect	Ferns	high	4.748	1,57	0.033	North > south
Summer						
Forest type	Herbs	high	4.403	2,57	0.017	Maple > spruce dominated
	Tall herbs	high	4.402	2,57	0.017	Maple > beech dominated
	Dwarf-shrubs	low	5.760	2,57	0.005	Spruce > maple/beech dominated
	Deciduous leaves	high	14.695	2,57	<0.001	Beech > spruce dominated
Altitude	Grasses	low	5.872	1,63	0.018	High > low
	Tall herbs	high	28.150	1,63	<0.001	High > low
	Deciduous leaves	high	18.824	1,63	<0.001	Low > high
	Needle shoots	low	4.603	1,63	0.036	High > low
Slope	Grasses	low	5.063	1,57	0.028	Steep > flat
Aspect	Ferns	high	4.551	1,57	0.037	North > south

^ahigh/low: mean crude protein content of plant group above/below average of the means of all plant groups.