

Supporting Information

Competition experiment: above-ground biomass

Table S1. Two-way ANOVA summary table for mean above-ground biomass of *Nassella trichotoma* individuals at the end of the 2016 (a) and 2017 (b) growing seasons, testing the effects of defoliation selectivity and intensity, and their interaction. Lowercase letters indicate significant differences among defoliation intensity means ($p < 0.05$). SS = sum of squares; df = degrees of freedom; MS = mean square; F = F-value; p = p-value.

(a)

Above-ground biomass 2016				
	SS	df	F-value	p-value
Selectivity (S)	156.12	1	4.18	0.0467
Intensity (I)	4593.09	2	61.52	<0.0001
S*I	205.05	2	2.75	0.0749
Error	1679.72	45		
Defoliation	Mean	St. Err.		
Selectivity (S)				
Selective	22.68	2.22	a	
Non-selective	18.21	2.32		b
Defoliation	Mean	St. Err.		
Intensity (I)				
WD	33.50	0.83	b	
LDI	13.63	1.35		a
HDI	13.11	2.42		a

12 (b)

Above-ground biomass 2017				
	SS	df	F-value	p-value
Selectivity (S)	50.47	1	1.06	0.3096
Intensity (I)	1354.44	2	14.19	<0.0001
S*I	31.90	2	0.33	0.7177
Error	2003.82	42		
Defoliation Intensity (I)	Mean	St. Err.		
WD	27.40	2.26	b	
LDI	15.06	1.46		a
HDI	15.54	1.52		a

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Tolerance experiment: above-ground biomass

Table S2. Two-way ANOVA summary table for mean above-ground biomass of *Nassella trichotoma* and *Chascolytrum subaristatum* individuals at the end of the 2016 (a) and 2017 (b) growing seasons, testing the effects of defoliation intensity, species, and their interaction. SS = sum of squares; df = degrees of freedom; MS = mean square; F = F-value; p = p-value.

(a)

Above-ground biomass 2016				
	SS	df	F-value	p-value
Intensity (I)	10674.46	2	48.48	<0.0001
Species (S)	367.52	1	3.34	0.0735
S*I	318.43	2	1.45	0.2450
Error	5614.92	51		
Defoliation Intensity (I)	Mean	St. Err.		
WD	40.40	3.14	b	
LDI	14.39	2.34		a
HDI	9.62	1.48		a

(b)

Above-ground biomass 2017				
	SS	df	F-value	p-value
Intensity (I)	758.85	2	6.80	0.0024
Species (S)	27.82	1	0.50	0.4834

S*I	20.07	2	0.18	0.8360
Error	2790.76	50		
Defoliation Intensity (I)	Mean	St. Err.		
WD	23.33	2.01	b	
LDI	18.66	1.74		ab
HDI	14.04	1.37		a

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Glasshouse tolerance experiment: above-ground biomass

Table S3. Two-way ANOVA summary table for mean above-ground biomass of (a) *Nassella trichotoma* and (b) *Chascolytrum subaristatum* measured at the end of the glasshouse growing season. The table reports ANOVA statistics for defoliation *intensity*, *species*, and their interaction. Lowercase letters denote significant differences among defoliation intensity means ($p < 0.05$). SS = sum of squares; df = degrees of freedom; MS = mean square; F = F-value; p = p-value.

Above-ground biomass				
	SS	df	F-value	p-value
Intensity (I)	8.86	2	18.74	<0.0001
Species (Sp)	5.57	1	23.57	<0.0001
I*Sp	1.27	2	2.70	0.0774
Error	11.58	49		
Defoliation Intensity (I)	Mean	St. Err.		
WD	1.69	0.08	b	
LDI	18.66	1.74		ab
HDI	14.04	1.37		a
Species (Sp)	Mean	St. Err.		
<i>N. trichotoma</i>	0.90	0.12	a	
<i>C. subaristatum</i>	1.50	0.12		b

64 (a)

Above-ground biomass <i>N. trichotoma</i>				
	SS	df	F-value	p-value
Intensity (I)	3.16	2	4.84	0.0172
Error	7.84	24		
Defoliation				
Intensity (I)	Mean	St. Err.		
<i>N. trichotoma</i>				
WD	1.26	0.23	b	
LDI	0.73	0.19		ab
HDI	0.44	0.20		a

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66 (b)

Above-ground biomass <i>C. subaristatum</i>				
	SS	df	F-value	p-value
Intensity (I)	1.02	2	44.89	<0.0001
Error	0.31	27		
Defoliation				
Intensity (I)	Mean	St. Err.		
<i>C. subaristatum</i>				
WD	2.11	0.17	c	
LDI	1.62	0.11		b
HDI	0.77	0.05		a

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Glasshouse tolerance experiment: number of tillers

Table S4. Two-way ANOVA summary table for mean number of tillers of (a) *Nassella trichotoma* and (b) *Chascolytrum subaristatum* measured at the end of the glasshouse growing season. The table reports ANOVA statistics for defoliation *intensity*, *species*, and their interaction. Lowercase letters denote significant differences among defoliation intensity means ($p < 0.05$). SS = sum of squares; df = degrees of freedom; MS = mean square; F = F-value; p = p-value.

Number of tillers				
	SS	df	F-value	p-value
Intensity (I)	4339.74	2	21.16	<0.0001
Species (Sp)	1770.84.	1	23.57	<0.0001
I*Sp	689.49	2	3.36	0.0428
Error	5024.42	49		
Defoliation Intensity (I)	Mean	St. Err.		
WD	38.95	1.71.	c	
LDI	25.05	2.23		b
HDI	16.68	1.71		a
Species (Sp)	Mean	St. Err.		
<i>N. trichotoma</i>	35.28	3.58	a	
<i>C. subaristatum</i>	21.33	1.52		b

80 (a)

Number of tillers <i>N. trichotoma</i>				
	SS	df	F-value	p-value
Intensity (I)	3817.22.	2	10.81	0.0005
Error	3883.82	22		
Defoliation				
Intensity (I)	Mean	St. Err.		
<i>N. trichotoma</i>				
WD	49.20	5.57	b	
LDI	31.11	3.44		a
HDI	18.33	2.80		a

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82 (b)

Number of tillers <i>C. subaristatum</i>				
	SS	df	F-value	p-value
Intensity (I)	890.07	2	10.53	0.0004
Error	1140.60	27		
Defoliation				
Intensity (I)	Mean	St. Err.		
<i>C. subaristatum</i>				
WD	28.70	2.28	b	
LDI	19.60	1.61		a
HDI	15.70	2.22		a

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85 **Competition experiment: basal area**

86 **Table S5.** Two-way ANOVA summary table for mean basal area of *Nassella trichotoma*
 87 individuals at the end of the 2016 (a) and 2017 (b) growing seasons, testing the effects of
 88 defoliation selectivity and intensity, and their interaction. Only main-effect means ($\pm$ SE) for
 89 defoliation intensity are presented. Lowercase letters indicate significant differences among
 90 defoliation intensity means ($p < 0.05$). SS = sum of squares; df = degrees of freedom; MS =
 91 mean square; F = F-value; p = p-value.

92 **(a)**

Basal Area 2016				
	SS	df	F-value	p-value
Selectivity (S)	26089.62	1	2.21	0.1431
Intensity (I)	97013.56	2	4.12	0.0222
S*I	23275.11	2	0.99	0.3797
Error	577253.55	52		
Defoliation Intensity	Mean	St. Err.		
WD	183.09	26.37		ab
LDI	261.15	24.27	b	
HDI	167.06	25.58		a

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101 (b)

Basal Area 2017				
	SS	df	F-value	p-value
Selectivity (S)	35579.88	1	4.42	0.0402
Intensity (I)	1127.31	2	0.07	0.9323
S*I	17056.87	2	1.06	0.3522
Error	417741.21	52		
Defoliation	Mean	St. Err.		
Selectivity (I)				
Selective	245.54	16.36	a	
Non-Selective	195.83	17.03		b

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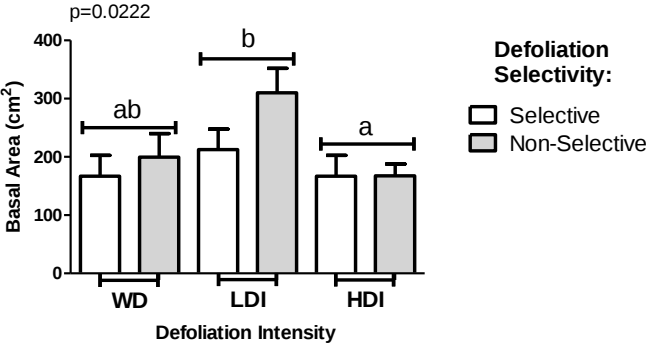
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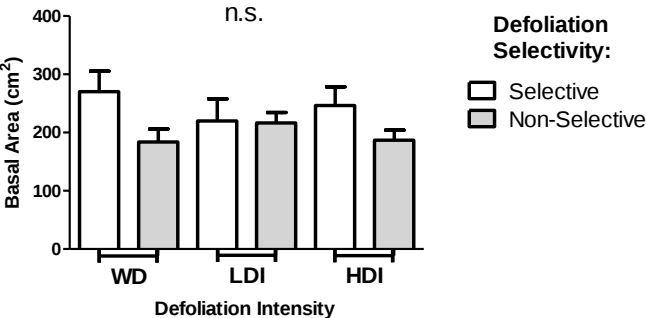
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Fig. S5. Basal area of *Nassella trichotoma* individuals at the end of the 2016 (a) and 2017 (b) growing seasons under different defoliation intensities: HDI (high defoliation intensity), LDI (low defoliation intensity), and WD (without defoliation), and defoliation selectivity treatments: selective (white bars; defoliation of palatable grasses only) and non-selective (grey bars; defoliation of *N. trichotoma* and palatable grasses). Bars represent means $\pm$ 1 SE. Lowercase letters indicate significant differences among defoliation intensity main-effect means ($p < 0.05$).

a).



b).



Tolerance experiment: basal area

Table S6. Two-way ANOVA summary table for mean basal area of *Nassella trichotoma* and *Chascolytrum subaristatum* individuals at the end of the 2016 (a) and 2017 (b) growing seasons, testing the effects of defoliation intensity, species, and their interaction. SS = sum of squares; df = degrees of freedom; MS = mean square; F = F-value; p = p-value.

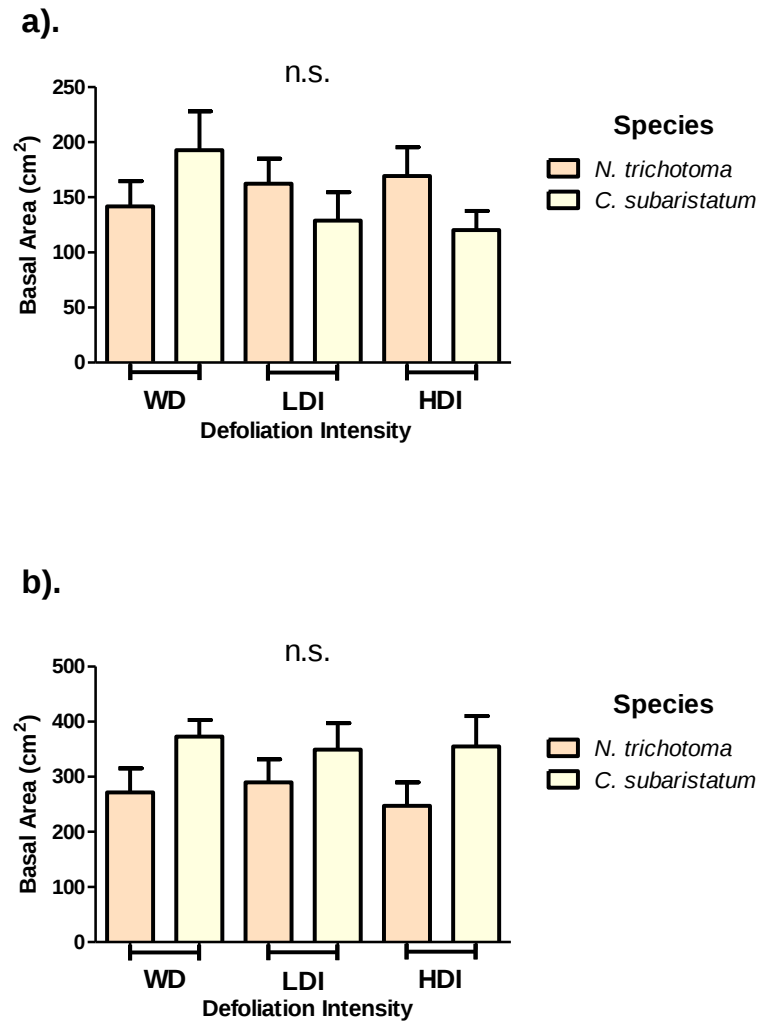
(a)

Basal Area 2016				
	SS	df	F-value	p-value
Intensity (I)	6541.01	2	0.50	0.6093
Species (S)	7310.29	1	1.12	0.2951
S*I	23282.13	2	1.78	0.1784
Error	353180.38	59		

(b)

Basal Area 2017				
	SS	df	F-value	p-value
Intensity (I)	5216.38	2	0.13	0.8751
Species (Sp)	120455.63	1	6.18	0.0161
Sp*I	7004.23	2	0.18	0.8361
Error	1052627.49	59		
Species (Sp)	Mean	St. Err.		
<i>N. trichotoma</i>	269.58	25.49	a	
<i>C. subaristatum</i>	359.20	25.49		b

Fig. S6. Basal area of *Nassella trichotoma* and *Chascolytrum subaristatum* individuals measured at the end of the 2016 (a) and 2017 (b) growing seasons under different defoliation intensities: HDI (high defoliation intensity), LDI (low defoliation intensity), and WD (without defoliation). Bars represent means $\pm$ 1 SE. “n.s.” indicates no significant differences among defoliation intensity main-effect means. ($p>0.05$).



Glasshouse tolerance experiment: basal area

Table S7. Two-way ANOVA summary table for mean basal area of (a) *Nassella trichotoma* and (b) *Chascolytrum subaristatum* measured at the end of the glasshouse growing season. The table reports ANOVA statistics for defoliation intensity, species, and their interaction, while only main-effect means ($\pm$ SE) for defoliation intensity are presented. Lowercase letters denote significant differences among defoliation intensity means ($p < 0.05$). SS = sum of squares; df = degrees of freedom; MS = mean square; F = F-value; p = p-value.

Basal Area				
	SS	df	F-value	p-value
Intensity (I)	1.38	2	7.33	0.0016
Species (Sp)	1.95	1	20.69	<0.05
I*Sp	0.36	2	1.94	0.1546
Error	7.78	49		
Defoliation Intensity (I)	Mean	St. Err.		
WD	43.14	5.95		b
LDI	30.88	4.94	ab	
HDI	22.72	4.04		a
Species (Sp)	Mean	St. Err.		
<i>N. trichotoma</i>	23.11	3.89	a	
<i>C. subaristatum</i>	41.17	4.29		b

Fig. S7. Basal area of *Nassella trichotoma* and *Chascolytrum subaristatum* individuals measured at the end of the glasshouse growing season under different defoliation intensities: HDI (high defoliation intensity), LDI (low defoliation intensity), and WD (without defoliation). Bars represent means $\pm$ 1 SE. Different lowercase letters indicate significant differences among defoliation intensity main-effect means ($p < 0.05$).

