

## Supporting Information for

### Enhanced top-down control of herbivore population growth on plants with impaired defences

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#### Appendix S2: Statistical analysis of the population dynamics experiments by date

Generalized linear models were performed to gain insight into the specific dates in which treatments showed significant differences. A Gaussian distribution and an identity link function were assumed for these generalized linear models (the glm function in R (version 4.2.0 (2022-04-22 ucrt))). The dependent variable was the density of mites (calculated as average number of individuals per leaflet) and the fixed factor was the treatment (i.e. a combination between plant genotype and the presence of predators). Pairwise comparisons were adjusted with Tukey ( $\alpha = 0.05$ ) using the package “emmeans” (Lenth, R., Singmann, H., Love, J., Buerkner, P., & Herve, M. (2019). Estimated Marginal Means, aka Least-Squares Means v. 1.1.).

**AS2 Table 1.** Densities per date of adapted spider mites (*Tetranychus urticae*) in the population dynamics experiments shown in Figure 3a

Treatment <sup>a</sup>	Predator	Genotype	Density of spider mites per leaflet (mean ± SE)*									
			day 14		day 21		day 28		day 35		day 42	
Hairless - pred	no	Hairless	15.3 ± 4.3	ns	121.5 ± 37.5	ns	130.1 ± 29.8	a	39.4 ± 33.6	a	3.8 ± 2.5	a
Wild type - pred	no	Wild type	14.2 ± 4.0	ns	107.8 ± 21.3	ns	108.9 ± 19.4	a	20.9 ± 7.5	a	4.4 ± 2.7	a
Hairless + pred	yes	Hairless	13.2 ± 1.9	ns	40.1 ± 7.9	ns	0.2 ± 0.1	b	0.05 ± 0.03	b	0.05 ± 0.03	b
Wild type + pred	yes	Wild type	11.6 ± 3.1	ns	90.8 ± 46.7	ns	40.7 ± 36.5	ab	2.4 ± 2.02	b	0.9 ± 0.6	ab

\*Different letters in columns indicate significant differences after glm on log-transformed data and pairwise comparisons (Tukey,  $\alpha = 0.05$ )

<sup>a</sup>Treatment refers to the two plant genotypes (Wild type and Hairless) with or without the release of predatory mites (*Phytoseiulus persimilis*).

**AS2 Table 2.** Densities per date of predatory mites (*Phytoseiulus persimilis*) in the population dynamics experiments shown in Figure 3b

Treatment <sup>a</sup>	Predator	Genotype	Density of predatory mites per leaflet (mean ± SE)*									
			day 14		day 21		day 28		day 35		day 42	
Hairless + pred	yes	Hairless	0.87 ± 0.32	ns	4.975 ± 3.45	ns	3.65 ± 0.73	a	0.2 ± 0.08	ns	0.6 ± 0.2	a
Wild type + pred	yes	Wild type	0.25 ± 0.24	ns	1.825 ± 1.26	ns	0.825 ± 0.61	b	0.1 ± 0.1	ns	0.075 ± 0.055	b

\*Different letters in columns indicate significant differences after glm on log-transformed data and pairwise comparisons (Tukey,  $\alpha = 0.05$ )

<sup>a</sup>Treatment refers to the two plant genotypes under study (Wild type and Hairless) with predators.

**AS2 Table 3.** Densities per date of maladapted spider mites (*Tetranychus urticae*) in the population dynamics experiments shown in Figure 3c

Treatment <sup>a</sup>	Predator	Genotype	Density of spider mites per leaflet (mean ± SE)*									
			day 14		day 21		day 28		day 35		day 42	
Wild type + pred	yes	Wild type	1.5 ± 0.7	ns	3 ± 2.05	ns	1.9 ± 0.7	ns	0.375 ± 0.128	a	1.2 ± 0.5	ns
Hairless + pred	yes	Hairless	0.6 ± 0.2	ns	0.175 ± 0.099	ns	0.55 ± 0.597	ns	0.075 ± 0.055	b	0.35 ± 0.40	ns

\*Different letters in columns indicate significant differences after glm on log-transformed data and pairwise comparisons (Tukey,  $\alpha = 0.05$ )

<sup>a</sup>Treatment refers to the two plant genotypes (Wild type and Hairless) with predators.

**AS2 Table 4.** Densities per date of predatory mites (*Phytoseiulus persimilis*) in the population dynamics experiment shown in Figure 3d

Treatment <sup>a</sup>	Predator	Genotype	Density of predatory mites per leaflet (mean ± SE)*									
			day 14		day 21		day 28		day 35		Day 42	
<b>Hairless + pred</b>	<b>yes</b>	<b>Hairless</b>	0.15 ± 0.06	ns	0.025 ± 0.029	ns	0.025 ± 0.029	ns	0.025 ± 0.029	ns	0	ns
<b>Wild type + pred</b>	<b>yes</b>	<b>Wild type</b>	0.05 ± 0.03	ns	0	ns	0.025 ± 0.029	ns	0	ns	0	ns

\*Different letters in columns indicate significant differences after glm on log-transformed data and pairwise comparisons (Tukey,  $\alpha = 0.05$ )

<sup>a</sup>Treatment refers to the two plant genotypes under study (Wild type and Hairless) with predators.

**AS2 Table 5.** Densities per date of tomato russet mites (*Aculops lycopersici*) in the population dynamics experiment shown in Figure 4a

Treatment <sup>a</sup>	Predator	Genotype	Density of tomato russet mites per leaflet (mean ± SE)*													
			day 14		day 21		day 25		day 28		day 33		day 36		day 39	
<b>Wild type - pred</b>	<b>no</b>	<b>Wild type</b>	54.7 ± 9.3	ns	119.1 ± 20.5	a	190.3 ± 25.4	a	317.7 ± 34.6	a	276.0 ± 28.6	a	369.3 ± 36.7	a	541.1 ± 142.5	a
<b>Wild type + pred</b>	<b>yes</b>	<b>Wild type</b>	49.6 ± 14.7	ns	132.4 ± 8.7	a	197.9 ± 5.8	a	234.0 ± 20.9	a	231.3 ± 34.7	a	360.7 ± 67.6	a	273.3 ± 84.2	a
<b>Hairless - pred</b>	<b>no</b>	<b>Hairless</b>	45.9 ± 13.4	ns	91.1 ± 14.3	a	59.3 ± 16.8	b	80.7 ± 12.8	b	32.7 ± 6.2	b	62.0 ± 9.1	b	80.7 ± 16.0	b
<b>Hairless + pred</b>	<b>yes</b>	<b>Hairless</b>	43.1 ± 12.3	ns	49.3 ± 4.0	b	40.1 ± 6.3	b	60.4 ± 14.1	b	31.7 ± 11.1	b	61.0 ± 9.8	b	50.0 ± 3.1	b

\*Different letters in columns indicate significant differences after glm on log-transformed data and pairwise comparisons (Tukey,  $\alpha = 0.05$ )

<sup>a</sup>Treatment refers to the two plant genotypes (Wild type and Hairless) with or without the release of predatory mites (*Amblydromalus limonicus*).

**AS2Table 6.** Densities per date of predatory mites (*Amblydromalus limonicus*) in the population dynamics experiment shown in Figure 4b

Treatment <sup>a</sup>	Predator	Genotype	Density of predatory mites per leaflet (mean ± SE)*								
			day 14	day 21	day 25	day 28	day 33	day 36	day 39		
<b>Hairless + pred</b>	<b>yes</b>	<b>Hairless</b>	0.16 ± 0.05 ns	0.4 ± 0.1 a	0.17 ± 0.11 ns	0.36 ± 0.12 a	1.9 ± 0.55 ns	3.3 ± 1.0 ns	2.7 ± 0.8 ns		
<b>Wild type + pred</b>	<b>yes</b>	<b>Wild type</b>	0.16 ± 0.06 ns	0.1 ± 0.1 b	0.04 ± 0.05 ns	0 b	0.27 ± 0.22 ns	1.2 ± 0.9 ns	3.8 ± 2.8 ns		

\*\*Different letters in columns indicate significant differences after glm on log-transformed data and pairwise comparisons (Tukey,  $\alpha = 0.05$ )

<sup>a</sup>Treatment refers to the two plant genotypes (Wild type and Hairless) with predators.