

Supplementary Material

Root symbionts modify biomass of white clover (*Trifolium repens*) through changes in radiation interception and radiation-use efficiency

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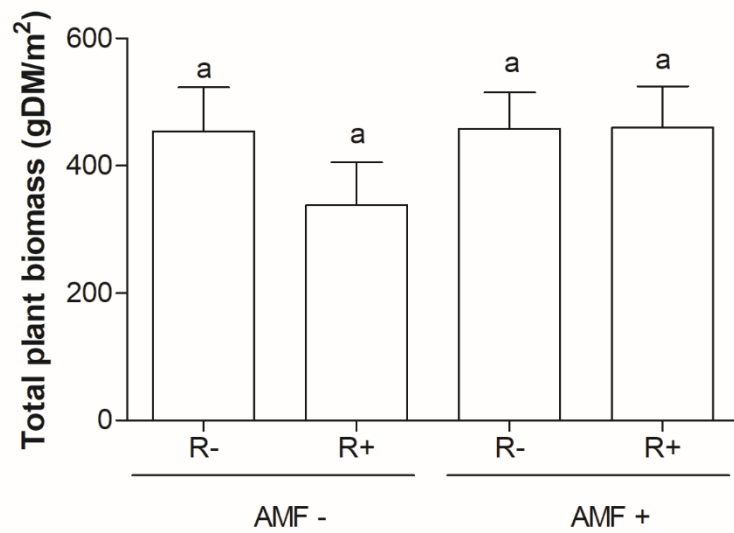
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SUPPLEMENTARY FIGURE S1: Illustration of notches incorporated into the trays to ensure accurate sensor placement without damaging the canopy while determining the transmitted photosynthetically active radiation



SUPPLEMENTARY FIGURE S2: Total (shoot and roots) biomass of white clover (*Trifolium repens*) without (-) and with (+) arbuscular mycorrhizal fungi (AMF) and rhizobium (R) inoculation. Each value represents the average of five repetitions. Bars indicate standard error. Means followed by the same letter do not differ significantly ($\alpha = 0.05$).

SUPPLEMENTARY TABLE S1: Spearman correlation coefficients between plant variables and the number of nodules in *Trifolium repens* without (AMF-) and with (AMF+) arbuscular mycorrhizal fungi inoculation.

Plant variable	AMF -		AMF +	
	Spearman coefficient	p-value	Spearman coefficient	p-value
SB	-0.38	0.3178	0.62	0.0611
RB	-0.30	0.4308	-0.42	0.2096
TB	-0.38	0.3179	-0.14	0.6758
Shoot:root ratio	-0.19	0.6198	0.94	0.0048
IPAR	0.17	0.6669	0.22	0.5011
PD	-0.11	0.7695	-0.09	0.7851
LD	0.26	0.5003	0.50	0.1313
LA	0.26	0.5003	-0.37	0.2674
SLA	0.19	0.6198	0.01	0.9855
tRUE	-0.54	0.1301	-0.18	0.5980
aRUE	-0.43	0.2446	0.62	0.0580
Greenness (VS)	-0.37	0.3296	0.41	0.2232
Greenness (RS)	0.32	0.4022	-0.91	0.0003
Leaf P concentration (VS)	0.47	0.2063	0.36	0.3080
Leaf P concentration (RS)	0.17	0.6790	0.72	0.0297

SB, shoot biomass; RB, root biomass; TB, total biomass; IPAR, intercepted photosynthetically active radiation; PD, plant density; LD, leaf density; LA, leaf area; SLA, specific leaf area; tRUE, total radiation use efficiency; aRUE, aboveground radiation use efficiency; VS, vegetative stage; RS, reproductive stage.

SUPPLEMENTARY TABLE S2: Spearman correlation coefficients between plant variables and arbuscular mycorrhizal parameters in *Trifolium repens* without (R-) and with (R+) rhizobium inoculation.

Plant variable	Arbuscules (%)		Vesicles (%)		Total root colonization (%)	
	Spearman coefficient	p-value	Spearman coefficient	p-value	Spearman coefficient	p-value
R -						
SB	-0.64	0.0563	-0.64	0.0443	-0.54	0.1098
RB	-0.18	0.6261	0.01	0.9933	0.07	0.8469
TB	-0.29	0.2834	-0.29	0.4236	-0.18	0.6130
Shoot:root	-0.36	0.2834	-0.74	0.0141	-0.62	0.0580
IPAR	0.47	0.1615	0.74	0.0153	0.63	0.0489
PD	0.09	0.7851	0.31	0.3833	0.22	0.5423
LD	0.68	0.0399	0.64	0.0443	0.70	0.0239
LA	0.75	0.0253	0.77	0.0089	0.80	0.0050
SLA	0.90	0.0067	0.52	0.1210	0.77	0.0098
tRUE	-0.75	0.0253	-0.69	0.0263	-0.68	0.0316
aRUE	-0.69	0.0263	-0.79	0.0062	-0.85	0.0020
Greenness (VS)	-0.58	0.0841	-0.25	0.4874	-0.48	0.1586
Greenness (RS)	0.58	0.0804	0.77	0.0085	0.79	0.0067
Leaf P (VS)	0.86	0.0013	0.62	0.0560	0.90	0.0005
Leaf P (RS)	0.50	0.2036	0.12	0.7708	0.24	0.5632
R+						
SB	0.25	0.4560	0.31	0.3833	0.39	0.2665
RB	0.12	0.7298	0.16	0.6505	0.25	0.4874
TB	0.25	0.4560	0.31	0.3833	0.39	0.2665
Shoot:root	0.43	0.1967	0.38	0.2830	0.41	0.2427
IPAR	0.77	0.0209	0.74	0.0141	0.77	0.0098
PD	0.13	0.7026	0.26	0.4657	0.35	0.3177
LD	0.56	0.0909	0.53	0.1166	0.68	0.0302
LA	0.75	0.0253	0.66	0.0392	0.87	0.0011
SLA	0.69	0.0263	0.12	0.7499	0.35	0.3206
tRUE	-0.62	0.0611	-0.42	0.2276	-0.50	0.1425
aRUE	-0.12	0.7507	0.15	0.6742	-0.03	0.9400
Greenness (VS)	-0.04	0.8987	-0.39	0.2665	-0.24	0.5096
Greenness (RS)	0.18	0.6261	0.23	0.5308	0.23	0.5195
Leaf P (VS)	0.73	0.0157	0.60	0.0660	0.57	0.0830
Leaf P (RS)	0.54	0.1059	0.42	0.2271	0.45	0.1912

SB, shoot biomass; RB, root biomass; TB, total biomass; IPAR, intercepted photosynthetically active radiation; PD, plant density; LD, leaf density; LA, leaf area; SLA, specific leaf area; tRUE, total radiation use efficiency; aRUE, aboveground radiation use efficiency; VS, vegetative stage; RS, reproductive stage.