

### Supplementary Material

**Table S1.** Multiple lineal regression analysis. CT-P: agricultural plot in Ponteveja, AF-P: afforested plot in Ponteveja; AF-L: afforested plot in Laraño; CT-L: agricultural plot in Laraño. N.A: Not applicable. Significance codes: '#': 0.1; '\*\*': 0.05; '\*\*\*': 0.01

Site	Plots	Soil Cover	MLR Model Expression	R <sup>2</sup> adjust (p-value)
Ponteveja	CT-P	Fallow-1	$SR = -0.38 + (0.04 Ts^{\#}) + (0.0024 W/FC)$	0.39 (0.1265)
		Maize-1	$SR = -0.26 + (0.02 Ts) + (0.01 W/FC)$	0.25 (0.2510)
		Fallow-2	$SR = -0.33 + (0.02 Ts^{*}) + (0.004 W/FC^{\#})$	0.47 (0.0636) <sup>#</sup>
	AF-P	N.A	$SR = 0.29 + (0.04 Ts^{*}) + (0.0019 W/FC)$	0.59 (0.0475) <sup>*</sup>
			$SR = -0.10 + (0.02 Ts) + (0.01 W/FC^{*})$	0.76 (0.0264) <sup>*</sup>
			$SR = -0.34 + (0.05 Ts^{**}) + (0.0018 W/FC)$	0.62 (0.0081) <sup>**</sup>
Laraño	CT-L	Pasture-1	$SR = 0.94 + (0.02 Ts) - (0.01 W/FC^{\#})$	0.89 (0.0018) <sup>**</sup>
		Maize-L	$SR = -0.05 + (0.02 Ts) + (0.01 W/FC^{*})$	0.66 (0.0524) <sup>#</sup>
		Pasture-2	$SR = -0.37 + (0.03 Ts^{**}) + (0.01 W/FC^{*})$	0.66 (0.0053) <sup>**</sup>
	AF-L	N.A	$SR = -0.28 + (0.05 Ts^{*}) - (0.0013 W/FC)$	0.80 (0.0078) <sup>**</sup>
			$SR = 0.25 + (0.01 Ts) + (0.0038 W/FC^{*})$	0.78 (0.0221) <sup>*</sup>
			$SR = -0.35 + (0.05 Ts^{**}) + (0.0017 W/FC)$	0.75 (0.0015) <sup>**</sup>

Table S1 presents the multiple lineal regression analysis with soil respiration (SR) as the dependent variable and soil temperature (Ts) and the soil water content relative to the soil filed capacity(W/FC) as independent variables.