

Supplementary Material

Yerba mate (*Ilex paraguariensis*) agroforestry systems: intraspecific differences in water relations and hydraulic architecture

Mariana Villagra^{A,B,*}, *Débora di Francescantonio*^{A,B}, *Nestor Munaretto*^C, and *Paula I. Campanello*^{D,E}

^AInstituto de Biología Subtropical, UNAM-CONICET, Av. Tres Fronteras 183, Puerto Iguazú, Misiones, Argentina.

^BCentro de Investigaciones del Bosque Atlántico, Puerto Iguazú, Misiones, Argentina.

^CInstituto Nacional de Tecnología Agropecuaria (INTA), Santo Pipó, Misiones, Argentina.

^DInstituto de Biotecnología Esquel, Universidad Nacional de la Patagonia San Juan Bosco, CONICET, Esquel, Chubut, Argentina.

^EFacultad de Ingeniería, Universidad Nacional de la Patagonia San Juan Bosco, Esquel, Argentina.

*Correspondence to: Mariana Villagra Instituto de Biología Subtropical, UNAM-CONICET, Av. Tres Fronteras 183, Puerto Iguazú, Misiones, Argentina Email: marian.villagra@gmail.com

Supplementary Information

Figure S1. The relationship between leaf hydraulic conductance (K_{leaf}) (a) and the loss of stem hydraulic conductivity (b) with increasing xylem tension. Shading around curves indicates 95% confidence intervals. Vertical lines show mean P50 (water potential at which 50% loss of conductance/conductivity occurred) for each cropping system with values and confidence intervals provided at the top of each plot. Treatments are: C, conventional crop system; P, yerba mate + *Peltophorum dubium*; T, yerba mate + *Toona ciliata*.

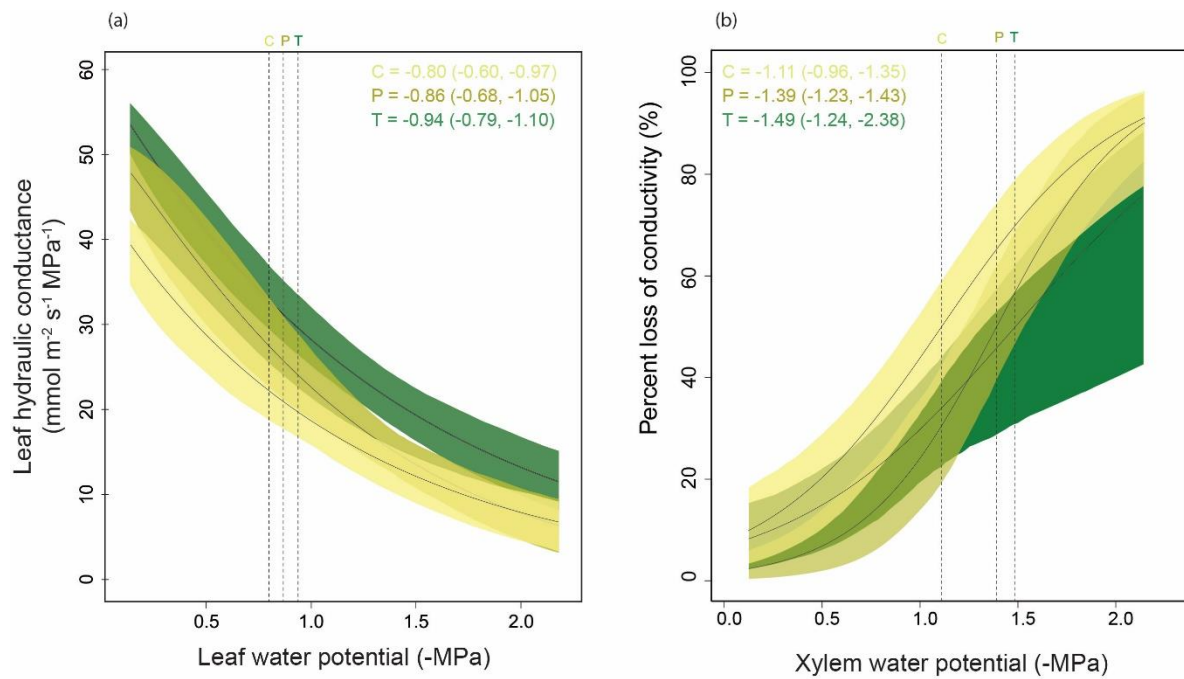


Figure S2. Water potential inducing 50% loss of xylem conductivity (P50) of leaves and stems of the C, P, and T treatments pooled. Mean values \pm SE are shown. Letters indicate significant differences at the 0.05 level via a paired T test.

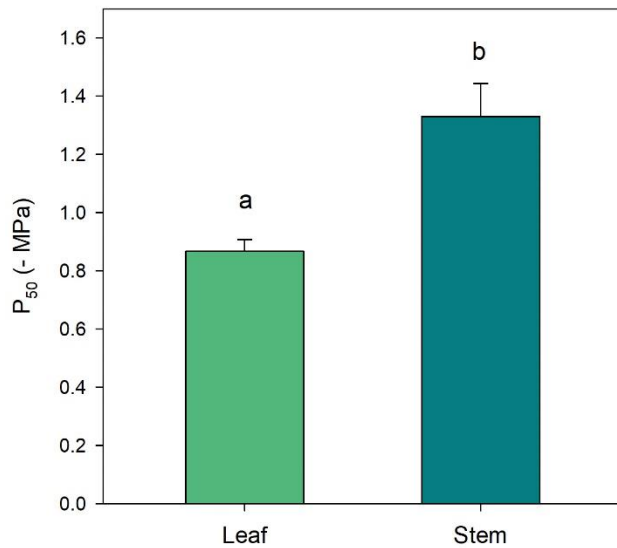


Table S1. Water potentials (MPa) causing 12% and 88% loss of conductivity in leaf and stem. In parenthesis are the bootstrap estimation of the confidence intervals. NA refers to convergence failures.

	C	P	T
Leaf			
P12	0.15 (NA, -0.26)	0.21 (NA, -0.38)	0.18 (-0.10, -0.28)
P88	2.46 (-1.92, NA)	2.20 (N, -0.26)	2.80 (NA, NA)
Stem			
P12	0.22 (NA, -0.58)	0.71 (-0.41, -0.97)	0.35 (NA, -0.77)
P88	2.01 (-1.73, NA)	2.07 (-1.84, NA)	NA (-2.12, NA)