

Supplementary Material

Table S1. Height of stem, diameter at breast height of the stem, wood density, potential hydraulic conductivity and wood quantitative anatomical features of 30-year-old *Balfourodendron riedelianum* trees from three provenance (AS, BA and GA) grown in Luís Antônio and Pederneiras common garden experiments. AS = Alvorada do Sul; BA = Bauru; GA = Gália. The values are shown as mean $\pm$ standard deviation (minimum and maximum values).

Provenance	Luís Antônio site trial			Pederneiras site trial		
	AS	BA	GA	AS	BA	GA
Stem height (m)	13.6 $\pm$ 2.6 (10 - 18)	14.0 $\pm$ 4.3 (7.4 - 17)	14.9 $\pm$ 3.2 (6.4 - 20.2)	8.9 $\pm$ 1.8 (6.4 - 12.7)	9.5 $\pm$ 2.2 (4.6 - 12)	10.8 $\pm$ 1.4(8.8- 13.2)
Stem diameter at breast height (cm)	14 $\pm$ 2.4 (9 - 18)	12.9 $\pm$ 2.2 (9.5 - 17)	16.0 $\pm$ 5.4 (9 - 24)	10.6 $\pm$ 1.5 (7.5 - 13)	12.1 $\pm$ 2.7 (9.5 - 19)	12.5 $\pm$ 3.2 (8.5 - 20)
Wood density (g cm ³)	0.70 $\pm$ 0.7 (0.64 - 0.77)	0.69 $\pm$ 0.06 (0.64 - 0.82)	0.70 $\pm$ 0.02 (0.67 - 0.74)	0.71 $\pm$ 0.03 (0.64 - 0.8)	0.69 $\pm$ 0.04 (0.63 - 0.78)	0.67 $\pm$ 0.03 (0.62 - 0.73)
Potential hydraulic conductivity (kg m ⁻¹ MPa ⁻¹ s ⁻¹)	25.8 $\pm$ 4.6 (18.6 - 32)	29.7 $\pm$ 7.4 (19.2 - 45)	57.3 $\pm$ 21.8 (36.1 - 115)	30.0 $\pm$ 12.1 (13.7 - 49)	17.6 $\pm$ 4.0 (11.4 - 26)	36.3 $\pm$ 6.0 (28 - 49.9)
Vessel diameter (μm)	54.9 $\pm$ 2.6 (50.3 - 59.5)	59.6 $\pm$ 2.2 (55.6 - 62.5)	75.4 $\pm$ 5.6 (68.5 - 90.4)	63.8 $\pm$ 2.0 (60.6 - 67.6)	50.2 $\pm$ 1.7 (47.3 - 53.6)	65.4 $\pm$ 3.2 (61 - 69.5)
Vessel wall thickness (μm)	5.67 $\pm$ 0.87 (3.0 – 10.06)	4.36 $\pm$ 0.66 (2.18 – 8.72)	7.23 $\pm$ 0.87 (5.36 – 10.15)	5.4 $\pm$ 0.76 (3.36 – 8.66)	4.02 $\pm$ 0.64 (2.04 – 6.74)	7.16 $\pm$ 0.81 (5.03 – 10.)
Vessel density (vessel mm ²)	94.6 $\pm$ 19.2 (73 – 138.4)	89.8 $\pm$ 17.7 (65.3 - 124.9)	64.4 $\pm$ 11 (48.1 - 81.9)	84.4 $\pm$ 15 (61.7 - 108)	99.1 $\pm$ 15.0 (67 - 115.5)	75.4 $\pm$ 15.2 (50.3 - 97)
Vessel element length	346.16 $\pm$ 33.6 (298 - 419.3)	353.4 $\pm$ 42.2 (294.1 – 429.3)	340.9 $\pm$ 33 (284.0 - 402.7)	311.9 $\pm$ 27.8 (269 - 349)	301.30 $\pm$ 37.7 (243.5 - 362.4)	315.22 $\pm$ 28.7 (273.3 - 373.5)
Vessel grouping index (μm)	2.3 $\pm$ 0.2 (1.91 - 2.75)	2.3 $\pm$ 0.3 (1.87 - 2.91)	1.9 $\pm$ 0.2 (1.62 - 2.09)	2.3 $\pm$ 0.2 (1.97 - 2.77)	2.5 $\pm$ 0.3(2.05 - 3.18)	1.9 $\pm$ 0.2 (1.53 - 2.21)
Intervessel pit area (μm ²)	9.95 $\pm$ 1.13 (6.97 – 13.68)	9.98 $\pm$ 1.04 (9.14 – 16.33)	11.49 $\pm$ 1.14 (6.67 – 12.49)	10 $\pm$ 1.19(5.50 – 14.6)	8.14 $\pm$ 1.12 (5.26 – 11.23)	9.45 $\pm$ 0.50.98 (7.12 – 13.11)

Intervessel pit aperture area (μm^2)	1.25±0.25 (0.52 – 2.37)	1.18±0.23 (0.72 – 1.93)	1.58±0.36 (0.73 – 3.04)	1.09±0.245 (0.54 – 2.19)	0.92±0.241 (0.42 – 1.56)	1.33±0.265 (0.72 – 2.40)
Fibre length (μm)	1412.9±109 (1270.2 - 1600.9)	1511.9±154 (1323.8 - 1857.3)	1554.6±132 (1315.5 - 1814.8)	1440.6±152 (1119.5 - 1718.6)	1518.1±126 (1317.8 - 1834.6)	1471.9±98 (126.2 - 1603.2)
Fibre diameter (μm)	15.0±0.9 (13.5 - 17.1)	15.4±1.2 (13 - 16.8)	15.5±1.0 (13.5 - 17.3)	14.9±0.9 (13.3 - 16.2)	15.2±0.8 (13.9 - 16.9)	15.5±0.7 (14.8 - 16.9)
Fibre lumen diameter (μm)	4.2±0.5 (3.2 - 5.1)	4.5±0.6 (3.2 - 5.7)	4.8±0.6 (3.8 - 5.6)	5.0±0.5 (4.4 - 6.2)	4.6±0.5 (3.9 - 5.6)	4.9±0.6 (3.4 - 5.9)
Fibre wall thickness (μm)	5.4±0.5 (4.5 - 6.3)	5.4±0.4 (4.6 - 6.1)	5.2±0.5 (4.5 - 6.1)	4.8±0.4 (3.9 - 5.4)	5.3±0.5 (4.7 - 5.9)	5.3±0.4 (4.4 - 6.1)
Ray height (μm)	240.6±35.1 (207.6 - 33.1)	234.4±39.2 (176 - 316.8)	264.8±40.9 (197.3 - 316.9)	223.1±17.5 (184.4 - 250.6)	221.5±26.2 (181.3 - 274.4)	260.3±28.3 (209.6 - 309)
Ray width (μm)	23.5±5.3 (16.8 - 26.5)	25.1±4.5 (17.4 - 29.2)	22.7±4.5 (17.7 - 31.6)	22.7±2.8 (17.3 - 27.3)	22.8±5.2 (16.1 - 30.8)	26.6±4.2 (18.4 - 31.3)
Ray density ($\text{n}^\circ \text{mm}^{-1}$)	6.5±0.8 (5.2 - 8.1)	6.4±0.6 (5.5 - 7.5)	6.1±0.7 (5.2 - 7)	8.6±0.8 (7.2 - 10)	7.9±0.6 (7.1 - 9)	7.2±0.8 (6.1 - 8.3)
Vessel fraction (%)	26.3±4.4 (20.1 - 35)	27.7±5.6 (20.2 - 36.3)	26.2±4.6 (20.5 - 35)	21.7±4.7 (13.7 - 31.7)	28±5.1 (22.7 - 36.5)	24.9±4.1 (16.4 - 30.2)
Fibre fraction (%)	36.1±6.0 (22.1 - 43.8)	35.0±8.3 (20 - 45.8)	40.4±6.7 (27.1 - 49.8)	39.2±6.1 (25.9 - 50)	32.7±5.7 (24 - 45.5)	37.7±7.7 (26.9 - 52.8)
Parenchyma fraction (%)	37.5±3.7 (32.7 - 46.3)	37.3±3.7 (33.1 - 45.7)	33.4±3.1 (29.5 - 39.4)	39.0±2.9 (34.6 - 44.5)	39.3±3.9 (31.6 - 45.4)	37.4±4.1 (30.7 - 44.2)

