

| | Control | | Waterlogged | | Recovery | | Sig. effect | Post-hoc |
|--|------------------|------------------|------------------|------------------|------------------|------------------|-------------|------------|
| | eCO ₂ | aCO ₂ | eCO ₂ | aCO ₂ | eCO ₂ | aCO ₂ | | |
| <i>Acacia floribunda</i> | | | | | | | | |
| Photosynthetic rate (A, $\mu\text{mol m}^{-2} \text{s}^{-1}$) | 13.41 (7.58) | 19.25 (7.47) | 20.9 (6.83) | 22.06 (7.68) | 17.15 (1.17) | 25.11 (6.3) | C | |
| Stomatal conductance (Gs, $\text{mmol m}^{-2} \text{s}^{-1}$) | 0.41 (0.11) | 0.41 (0.07) | 0.36 (0.16) | 0.24 (0.07) | 0.27 (0.04) | 0.49 (0.12) | NS | |
| Water use efficiency (A/Gs) | 1 (0.43) | 1.22 (0.62) | 1.89 (0.53) | 2.55 (0.65) | 2.02 (0.35) | 1.53 (0.44) | W | cw, cr |
| Dry root biomass (g) | 5.64 (2.35) | 6.02 (2.51) | | | 3.74 (0.76) | 4.64 (0.94) | W | |
| Dry fine root biomass (g) | 2.12 (1.5) | 2.27 (1.07) | | | 1.01 (0.39) | 1.21 (0.35) | W | |
| Dry shoot biomass (g) | 8.9 (4.17) | 10.93 (3.67) | | | 9.29 (1.65) | 10.27 (3.13) | NS | |
| Root mass fraction | 0.4 (0.14) | 0.35 (0.07) | 0.2 (0.02) | 0.24 (0.05) | 0.29 (0.03) | 0.32 (0.03) | W | cw, wr, cr |
| Fine root DMC (%) | 0.13 (0.03) | 0.16 (0.04) | 0.18 (0.07) | 0.15 (0.03) | 0.13 (0.01) | 0.12 (0.02) | W | wr |
| SLA ($\text{cm}^2 \text{g}^{-1}$) | 27.54 (2.12) | 28.26 (2.33) | 24.83 (2.15) | 24.72 (3.12) | 29.91 (2.91) | 27.84 (1.4) | W | cw, wr |
| Stem density (g cm^{-2}) | 0.46 (0.07) | 0.48 (0.05) | 0.49 (0.04) | 0.54 (0.07) | 0.5 (0.02) | 0.47 (0.12) | NS | |
| <i>Casuarina cunninghamiana</i> | | | | | | | | |
| Photosynthetic rate (A, $\mu\text{mol m}^{-2} \text{s}^{-1}$) | 25.3 (6.32) | 38.11 (7.8) | 26.63 (7.53) | 33.53 (3.75) | 27.41 (1.81) | 35.38 (7.6) | C | |
| Stomatal conductance (Gs, $\text{mmol m}^{-2} \text{s}^{-1}$) | 0.53 (0.14) | 0.66 (0.15) | 0.64 (0.07) | 0.57 (0.07) | 0.57 (0.07) | 0.61 (0.14) | NS | |
| Water use efficiency (A/Gs) | 1.5 (0.2) | 1.69 (0.08) | 1.26 (0.24) | 1.72 (0.23) | 1.65 (0.18) | 1.65 (0.07) | C x W, C | w |
| Dry root biomass (g) | 5.79 (3.1) | 10.88 (3.67) | | | 6.31 (2.07) | 7.05 (2.75) | C x W, C | c |
| Dry fine root biomass (g) | 1.66 (1.23) | 4.11 (1.96) | | | 1.95 (0.73) | 2.61 (1.31) | C x W*, C | c |
| Dry shoot biomass (g) | 10.44 (3.75) | 17.19 (5.66) | | | 11.97 (3.28) | 10.55 (3) | C x W | |
| Root mass fraction | 0.34 (0.06) | 0.39 (0.04) | 0.29 (0.1) | 0.27 (0.04) | 0.34 (0.03) | 0.39 (0.04) | W | |
| Fine root DMC (%) | 0.18 (0.08) | 0.25 (0.07) | 0.18 (0.08) | 0.21 (0.04) | 0.15 (0.02) | 0.19 (0.03) | C | |
| SLA ($\text{cm}^2 \text{g}^{-1}$) | 20.82 (2.39) | 18.84 (1.76) | 20.76 (1.61) | 20.57 (2.33) | 20.3 (2.19) | 21.61 (1.47) | NS | |
| Stem density (g cm^{-2}) | 0.4 (0.03) | 0.44 (0.02) | 0.34 (0.09) | 0.4 (0.03) | 0.41 (0.02) | 0.41 (0.04) | C | |

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| | eCO ₂ | aCO ₂ | eCO ₂ | aCO ₂ | eCO ₂ | aCO ₂ | | |
| <i>Eucalyptus camaldulensis</i> | | | | | | | | |
| Photosynthetic rate (A, $\mu\text{mol m}^{-2} \text{s}^{-1}$) | 9.94 (5.88) | 15.46 (1.49) | 15.46 (1.49) | 18.39 (5.11) | 17.99 (3.87) | 21.09 (2.95) | C, W | cr |
| Stomatal conductance (Gs, $\text{mmol m}^{-2} \text{s}^{-1}$) | 0.14 (0.08) | 0.17 (0.10) | 0.32 (0.09) | 0.28 (0.13) | 0.52 (0.17) | 0.35 (0.08) | W | cw, wr, cr |
| Water use efficiency (A/Gs) | 2.1 (0.4) | 3.26 (1) | 1.99 (0.25) | 2.65 (0.46) | 1.93 (0.21) | 2.48 (0.47) | C | |
| Dry root biomass (g) | 14.85 (3.5) | 14.32 (2.58) | | | 14.09 (5.73) | 13.42 (6.51) | NS | |
| Dry fine root biomass (g) | 2.64 (1.84) | 1.73 (0.93) | | | 3.69 (2.73) | 3.82 (2.22) | W | |
| Dry shoot biomass (g) | 22.93 (5.31) | 22.63 (6.13) | | | 26.49 (10.35) | 23.23 (8.49) | NS | |
| Root mass fraction | 0.39 (0.05) | 0.39 (0.05) | 0.25 (0.02) | 0.25 (0.06) | 0.35 (0.11) | 0.36 (0.05) | W | cw, rw |
| Fine root DMC (SLA ($\text{cm}^2 \text{g}^{-1}$)) | 31.7 (8.24) | 28.11 (1.74) | 31.38 (1.8) | 31.82 (3.61) | 28.59 (1.59) | 28.08 (0.74) | W | cw, wr |
| Stem density (g cm^{-2}) | 0.39 (0.02) | 0.41 (0.02) | 0.38 (0.02) | 0.39 (0.04) | 0.39 (0.04) | 0.39 (0.06) | N | |