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Functional Plant Biology

Supplementary Material

Changes in photosynthesis and chlorophyll *a* fluorescence in relation to leaf temperature from just before to after harvest of *Vitis vinifera* cv. Shiraz vines grown in outdoor conditions

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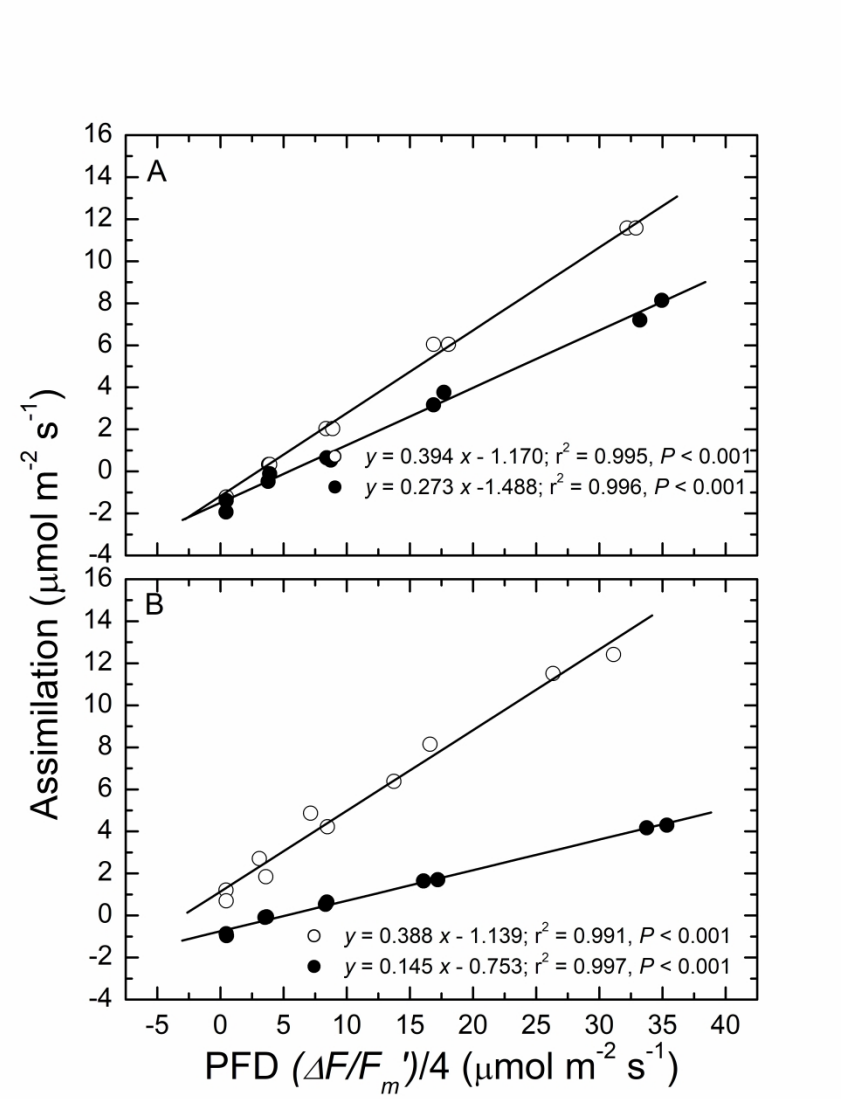

Supplementary figure

Fig. S1. The relationship between assimilation (A400) and the product of photon flux density (PFD) * the PSII quantum efficiency measured at 25 (A) and 35oC (B) leaf temperatures. In all cases, the PFD was restricted to below 200 μmol (photons) m-2 s-1 and the light responses were conducted at 400 μmol mol-1 (closed symbols) to represent photorespiratory conditions and at 1000 μmol mol-1 (open symbols) to represent non-photorespiratory conditions. The linear regressions for each were highly significant and the intercept gives a measure of day respiration and the slope of the regressions give the Yin et al. (2011) and van der Putten et al. (2018) lumped parameter s which is used to correct the chlorophyll fluorescence measured electron transport rate, Jfl for the absorptance ratio, and fraction of the absorbed PFD by PSII. These corrected ETR data were then used in the calculation of mesophyll conductance, using Equation 4 above. These data in Fig. S1 were measured on fruiting Shiraz vines during mid-summer and the rate of day respiration accords with that measured by non-linear regression from A/ci data (see Fig. 4). As the experiments undertaken in the present study could not exclude photorespiration from occurring, the parameter s adopted in the calculations was 0.394. Importantly, as there were only minor differences in the