

## SUPPLEMENTARY DATA

Table S1. Environmental conditions experienced for the different growth periods studied during the two experiments. Tm, PPFD and VPD refer to daily average temperature (°C), daily average photon flux density ( $\mu\text{mole PAR.m}^{-2}$ ) and daily average vapour pressure deficit (kPa), respectively. Values in parenthesis are for minimum and maximum values over the period.

Year	Growth period	Tm	PPFD	VPD	
Exp 1	2009	1 (Growth)	14.5 (7.2 - 23.6)	1018	1.3 (0.9 - 2)
		2 (Regrowth)	18.9 (14.3 - 25.1)	1064	1.4 (1.1 - 1.9)
	2012	1 (Growth)	16.0 (9.9 - 22.7)	934	1.4 (0.7 - 2)
		2 (Regrowth)	18.4 (15.4 - 26.5)	981	1.5 (1.1 - 2.1)
Exp 2	2009	1 (Growth)	14.5 (7.2 - 23.6)	1018	1.3 (0.9 - 2)
		2 (Regrowth)	18.9 (14.3 - 25.1)	1064	1.4 (1.1 - 1.9)
	2010	1 (Growth)	15.1 (7.8 - 22.5)	919	1.4 (0.8 - 1.8)
		2 (Regrowth)	21.0 (13.1 - 26.5)	1136	1.7 (1.1 - 2.2)

Fig. S1. Diagrams of a) the arrangement of the main axis, secondary and tertiary axes on a seedling plant (initial growth cycle) and b) the types of main axes emerging either from the taproot (T2) or from the axil of a leaf just below the cutting height (T1) of a mature plant during a regrowth cycle. Redrawn from Moreau et al. (2007) and Gosse et al. (1988)

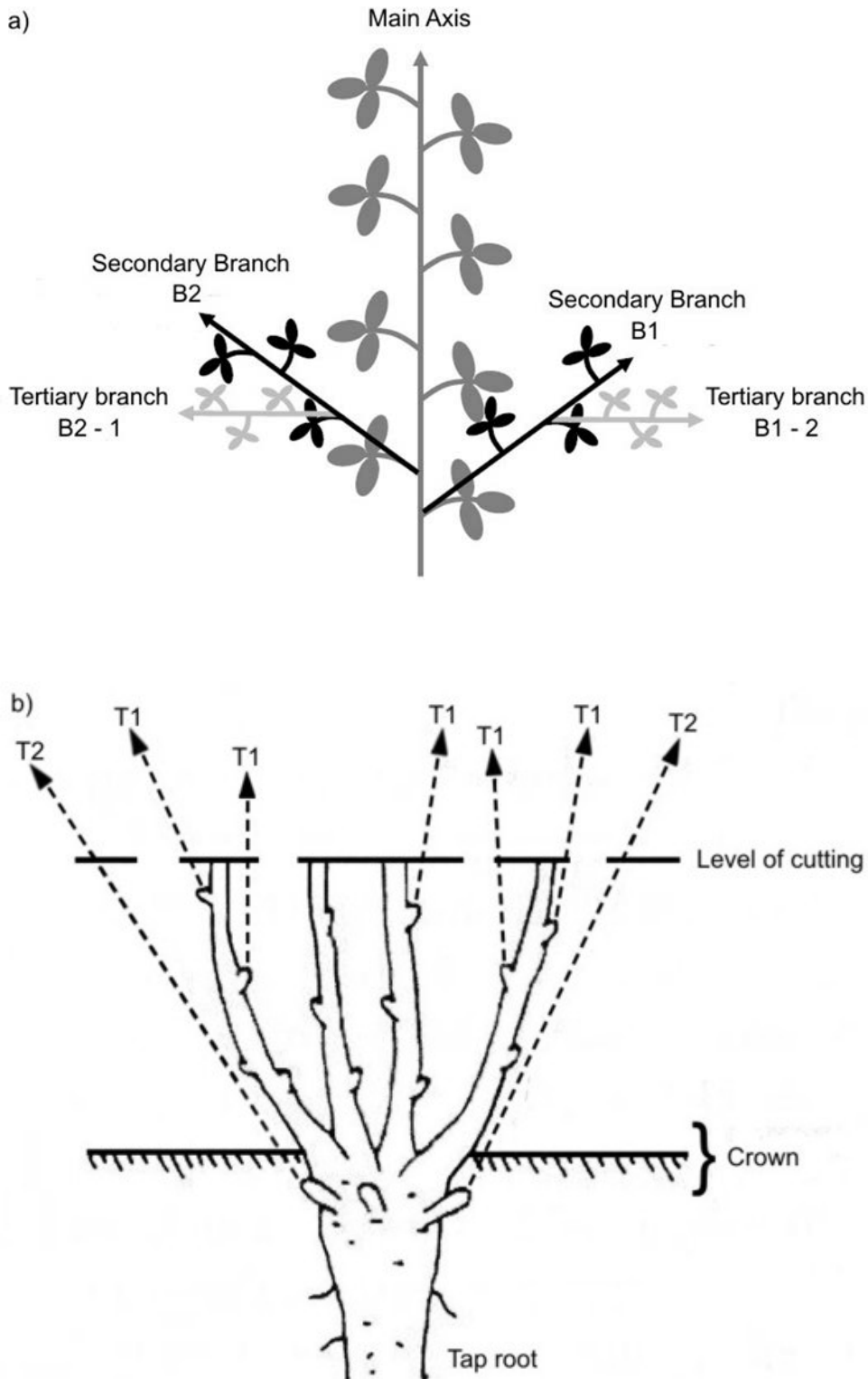


Fig. S2. Number of leaves on branches as a function of thermal-time accumulation expressed in cumulative degree-days from shoot emergence during the growth phases of Exp. 1. Open and closed symbols indicate 2012 and 2009 data, respectively. Date of branch appearance (*DA*) and phyllochron (*RLa*<sup>-1</sup>) estimated from linear regressions are indicated in each panel.

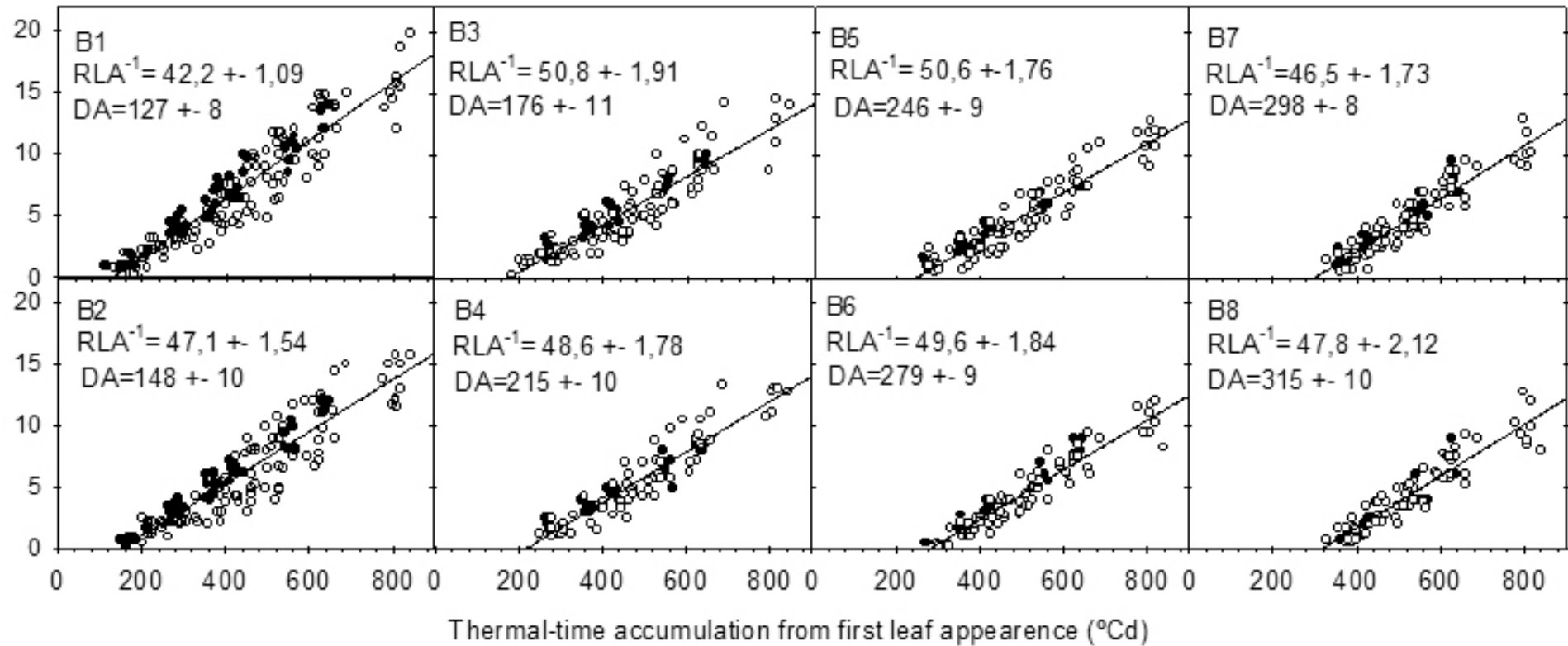


Fig. S3. Dynamics of canopy light interception efficiency measured in the different pure and mixture stands studied.

