Table S1. Deficit Irrigation strategies and treatments applied according to phenological stages and crop water evapotranspiration (ETc) during the 2022 year

Strategy	Treatment	Phenological growth stages and corresponding dates	Water irrigation amount (mm)[1]				Fruit yield (Kg/tree)[1]
			Total water	SP1	NP	SP2	
Control	T0	Full season (all phases)	304	88 (100%ETc)	110 (100%ETc)	106 (100%ETc)	114.4
Regulated	T1	SP1: Full flowering to the beginning of	246	88 (100%ETc)	77 (70%ETc)	106 (100%ETc)	123.3
Deficit	T2	pit hardening (05 April – 01 June)	235	88 (100%ETc)	66 (60%ETc)	106 (100%ETc)	112.5
Irrigation (RDI)	T3	NP: From pit hardening to the beginning	212	70 (80%ETc)	77 (70%ETc)	84 (80%ETc)	99.6
	T4	of oil synthesis (02 June – 03 August)	201	70 (80%ETc)	66 (60%ETc)	84 (80%ETc)	88.3
Sustained	T5	SP2: From the beginning of oil synthesis	196	62 (70%ETc)	77 (70%ETc)	74 (70%ETc)	53.5
Deficit	T6	to harvest (04 August – 03 Novembre)	168	53 (60%ETc)	66 (60%ETc)	63 (60%ETc)	55.8
Irrigation (SDI)							

ETc: crop water evapotranspiration. SP: sensitive period. NP: non-sensitive period. [1] Data retrieved from Ibba et al. [25]