

Supplementary Material

Appropriate time interval of PPFD measurement to estimate daily photosynthetic gain

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Table S1. Relative daily integral net photosynthetic gain simulated using three models and PPFD data at four time intervals (10 s, 1 min, 10 min, and 60 min). Simulation was conducted with maximum rate of electron transport (J_{\max}) of $60 \mu\text{mol m}^{-2} \text{s}^{-1}$, maximum rate of carboxylation ($V_{c,\max}$) of $100 \mu\text{mol m}^{-2} \text{s}^{-1}$, and day respiration rate (R_d) of $1 \mu\text{mol m}^{-2} \text{s}^{-1}$

Median and mean values calculated from daily values relative to those simulated by using a steady-state model and 60-min-interval PPFD data are shown

Model	10 s		1 min		10 min		60 min	
	Median	Mean	Median	Mean	Median	Mean	Median	Mean
Steady-state	0.982	0.980	0.982	0.980	0.984	0.982	1.000	1.000
Dynamic (fast)	0.969	0.967	0.971	0.968	0.977	0.974	0.994	0.993
Dynamic (slow)	0.952	0.947	0.953	0.949	0.961	0.957	0.980	0.979