

Table S3. The multiple linear regression model for net photosynthesis rate, dried tuberous root yield, aqueous extract content of tuberous roots and polysaccharide content of tuberous roots.

Dependent variable	Predictors	Coefficients	S. E.	<i>P</i> value	VIF	AIC	R <sup>2</sup> adj	<i>P</i> value	DF
Pn	Intercept	-11.594	5.48	0.05		-3.76	0.73	<0.001	14
	Gs	53.32	13.11	<0.001	1.70				
	SLW	216.87	86.89	0.02	1.38				
	VPD <sub>L</sub>	-4.51	3.13	0.04	1.59				
AE	Intercept	39.36	1.20	<0.001		-10.15	0.65	<0.001	14
	Pn	39.6	0.22	0.28	4.31				
	Chl a	-123.6	59.5	0.02	2.91				
	Gs	7.06	13.76	0.03	2.37				
PS	Intercept	-9.24	4.00	0.04		38.76	0.76	<0.001	15
	Pn	-7.31	0.54	<0.01	1.65				
	SLW	884.58	316.60	0.01	1.65				

Note: VIF less than 5 indicates no multicollinearity between predictors. The table shows unstandardized parameter estimates. The full model for Pn was  $Pn \sim Gs + Chl\ a + Chl\ b + SLW + VPD$ , and the best model was  $Pn \sim Gs + SLW + VPD$ ; the full model for DY was  $DY \sim Pn + Gs + Tr + WUE + Chl\ a + Chl\ b$ , and the best model was  $DY \sim Pn$ ; the full model for AE was  $AE \sim Pn + Gs + Tr + WUE + Chl\ a + Chl\ b + SLW$ , and the best model was  $AE \sim Chl\ a + Chl\ b + SLW$ ; the full model for PS was  $PS \sim Pn + Gs + Tr + WUE + Chl\ a + Chl\ b + SLW$ , and the best model was  $Ps \sim Chl\ a + Chl\ b + Gs$ . Abbreviations: Pn, leaf net photosynthesis rate; Gs, leaf stomatal conductance; SLW, specific leaf weight; VPD<sub>L</sub>, leaf-air vapor pressure deficit; DY, dried tuberous root yield; AE, aqueous extract content of tuberous roots; chlorophyll a content per unit leaf area; PS, polysaccharide content of tuberous roots; S. E., standard error; VIF, variance inflation factors; R<sup>2</sup>adj, adjusted R-square; DF, degree of freedom; AIC, Akaike information criterion.