

Table S1. The results of the REP_{value} model for predicting the LAI.

Ratio	LAI model	R ²	RMSE
1:1	y=0.255e ^{352.9x}	0.82**	0.54
2:1	y=0.272e ^{346.8x}	0.85**	0.49
3:1	y=0.348e ^{307.2x}	0.83**	0.48
4:1	y=0.361e ^{304x}	0.86**	0.48
9:1	y=0.349e ^{308.4x}	0.86**	0.45

Note: Ratio represents the number of ratio for calibration and validation data sets.

Table S2. The results of the MSR model for predicting the LNA.

Note: Ratio represents the number of ratio for calibration and validation data sets.

Ratio	LNA model	R ²	RMSE(kg/ha)
1:1	y=3.488e ^{0.64x}	0.85**	10.71
2:1	y=4.67e ^{0.58x}	0.90**	8.30
3:1	y=4.32e ^{0.59x}	0.86**	10.46
4:1	y=4.36e ^{0.59x}	0.87**	10.07
9:1	y=4.37e ^{0.59x}	0.87**	10.65

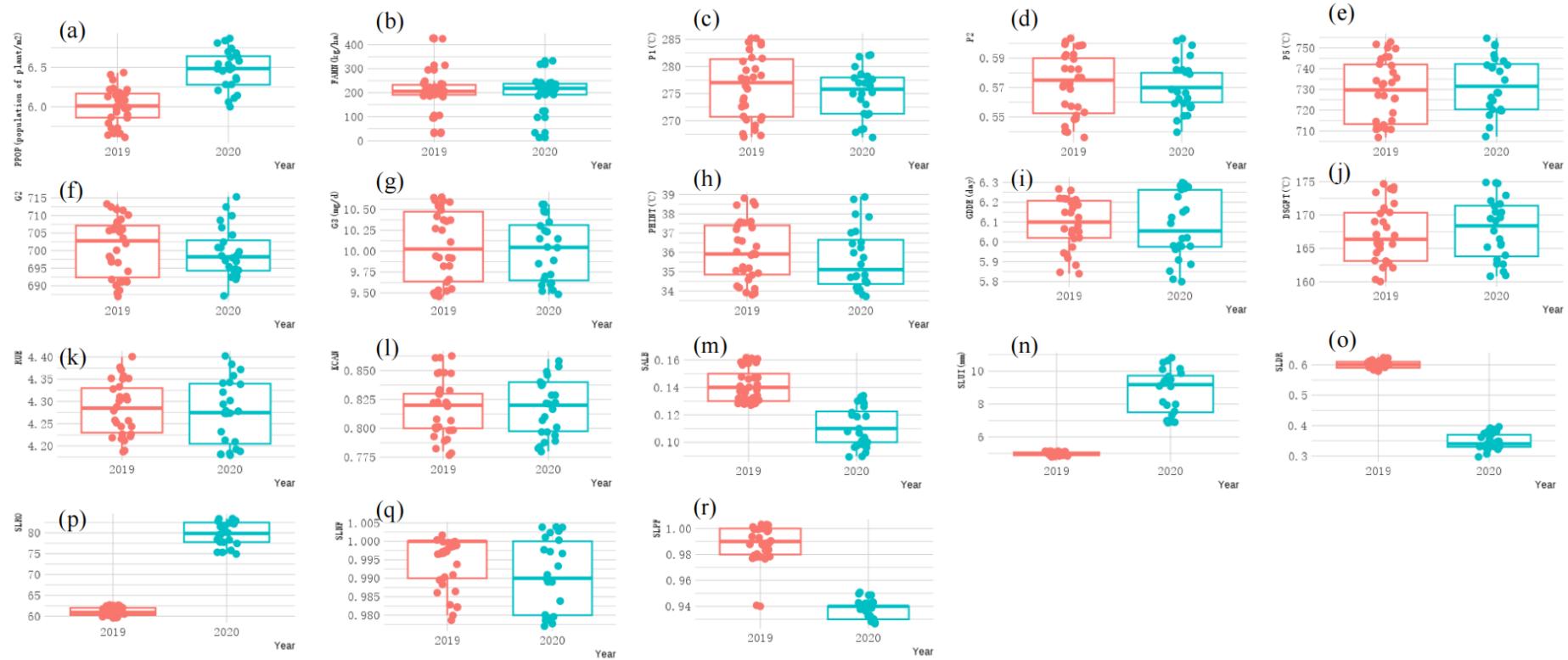


Figure S1. The final distribution range of each optimization parameter