

Supplemental Table S1. Effect of nitrogen application on the growth of different tea varieties.

Variety	Treatment	Hight/cm	Steam diameter /mm	Branch nuber
FD	N0 (CK)	36.63±0.19	5.45±0.18	6.40±0.23
	N1	41.38±0.18**	6.01±0.28	6.80±0.11
	N2	45.01±0.21**	6.30±0.12*	6.80±0.22
	N3	44.40±0.14**	5.91±0.15	6.20±0.17
HJ1	N0 (CK)	35.60±0.19	5.38±0.23	4.82±0.22
	N1	39.91±0.05*	5.89±0.14**	5.69±0.17*
	N2	42.05±0.27*	5.92±0.17**	5.73±0.18*
	N3	39.72±0.14*	5.50±0.07	5.45±0.05

Each data represents the mean of 15 replicates (±S.D. (standard deviation)). ** and * represent statistical t-test P values less than significance levels 0.01 ,0.05 under different nitrogen levels of the same variety, respectively.

Supplemental Table S2. Primers used for qRT-PCR assays in tea leaves.

Gene	Gene ID	Forward primer (5' to 3')	Reverse primer (5' to 3')
<i>CsSOD</i>	TEA003051	GACTTTCAGAATCGACGGCC	CATTACCTGCTGCATTCCCC
<i>CsPOD</i>	KR296654	GGACCCTTCACTGGACTCAA	ACAGACCCTTCCCTCCAATG
<i>CsCAT</i>	KR819178	ATGAACGTGGTAGCCCTGAA	TGTGAGACTTTGGGTTGGGT
<i>CsAPX</i>	TEA028696	GCCTCATCGCTGAGAAGAAC	AAGTACCAGCAGAGTGCCAT
<i>CsACTIN</i>	TEA019481.1	GCCATCTTTGATTGGAATGG	GGTGCCACAACCTTGATCTT