

**Table S1.** Code and sequence of 10 pairs of SSR primers used in this study.

Code	Repeat motif	No. of repeats	Forward primer	Reverse primer	Product size (bp)	Annealing temperature (°C)
Ginger02	TA	17	CTTCCTTATGTGCGTTTGTGC	TATCTGGAATGTTGATGAAGTTACC	405	53.3
Ginger07	GA	16	ATTGGTTGCGGAATAAAGGTGT	AGCAAAATGGATTAAACATTTGGTC	236	53.1
Ginger11	AG	18	AAATGGAGAAGGGGAATAAT	GCTGAATCATCAATCTTTGTAGTTT	275	50.5
Ginger25	GAAAAA	5	ACTCCAGCAGAACCACAACG	TGGAGGTATCCTCGGTGTCC	455	58.5
Ginger49	AT	18	CCTCTGTTCAAGTTGTTGCCTTGC	ACCGCACGGGCTGTGGATA	328	61.0
Ginger58	TA	20	GTCTGTACCATCGGGTTTTGTTA	TTATACCTTGAGATAGGGATGCC	361	53.9
Ginger77	AG	23	GATTTACTTTCAACCAGTCAACCCTT	CACTTGCATCACTCTGATCAACA	322	55.0
Ginger84	GGCGGT	5	ACTGCAGCGATTGCGTTTC	GAAGAACTGGAGCGAACGAAG	360	56.5
Ginger92	TA	30	CGACTATTGTGCTTGGGTTGA	ACCATCGCCGTCGTACTAAA	343	55.6
Ginger97	GA	17	TTTATCCGGTTGGCTCAGC	GTATGTCTCTTTCAGCATTCTCAC	238	55.4

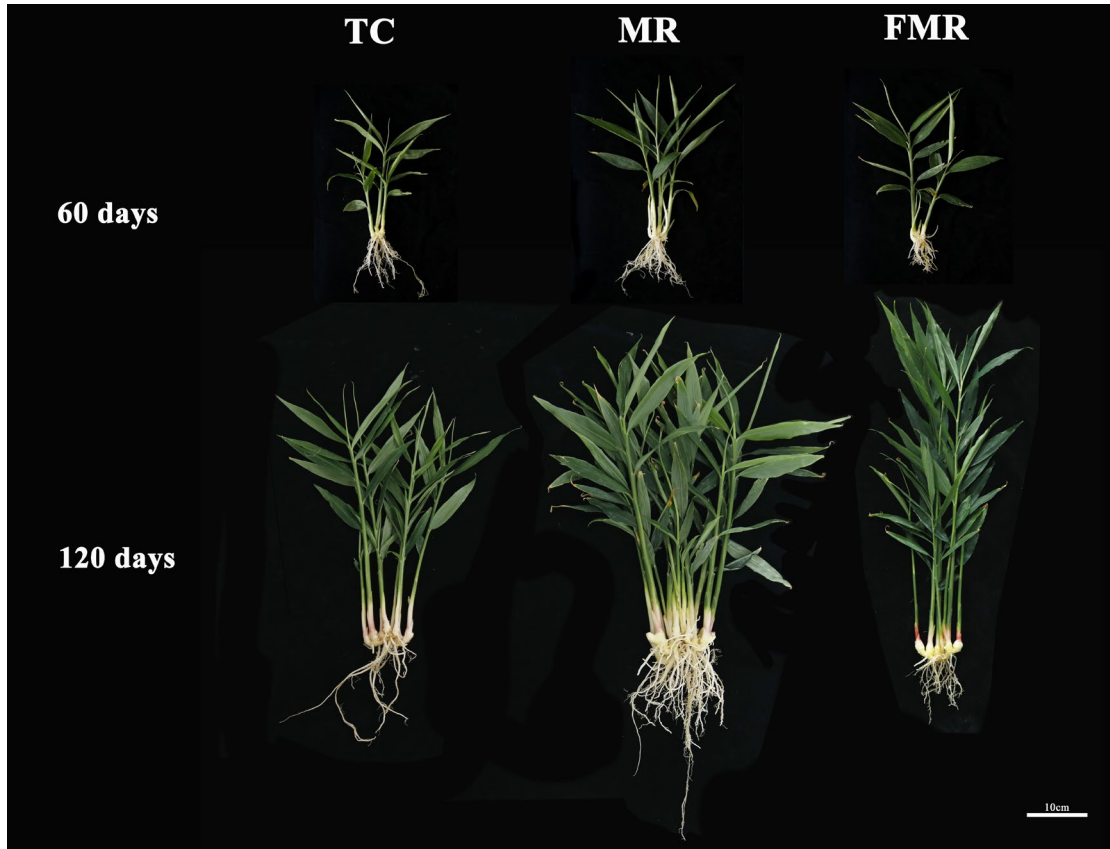
**Table S2.** Variance analysis of the number and fresh weight of the microrhizomes induced from the *in vitro*-grown ‘Fengtou’ ginger in the orthogonal design experiment of L<sub>9</sub> (3<sup>3</sup>).

Parameters	Source of variance	Degree of freedom	Type III sum of squares	Mean square	F value	Sig.
No. of induced microrhizomes per explant	BAP	2	203.984	101.992	110.158	0.000***
	Sucrose	2	125.968	62.984	68.027	0.000***
	Photoperiod	2	22.220	11.110	12.000	0.000***
	Error	20	18.517	0.926		
	Total	27	930.568			
Microrhizome fresh weight (mg)	BAP	2	51251.83	25625.92	51.34	0.000***
	Sucrose	2	3847.2053	1923.60	3.85	0.038*
	Photoperiod	2	5028.715	2514.36	5.04	0.017*
	Error	20	9983.55	499.18		
	Total	27	424143.00			

\* and \*\*\* indicate significant differences at  $p < 0.05$  and  $0.001$ , respectively.



**Figure S1.** Representative shoots, roots, and microrhizomes produced from the plants of *Zingiber officinale* cv. 'Fengtou' after 60 days of culture on the MS basal medium supplemented with different concentrations of BAP (1.0, 2.0, and 3.0 mg l<sup>-1</sup>) and sucrose (60, 80, and 100 g l<sup>-1</sup>) under different photoperiods (12, 16, and 20 h d<sup>-1</sup>). T1–T9 represented the nine treatments designed by a L<sub>9</sub>(3<sup>3</sup>) orthogonal array. Bars = 1.0 cm.



**Figure S2.** The field performance of the TC, MR, and FMR plants after 60 and 120 days of planting in the field.