

Table S1. The persimmon germplasms distribution in Jiangxi Province.

Number	Persimmon Genotype	Number	Persimmon Genotype
1	Yudu heshi	20	Yifeng yuansi
2	Yudu bingshi	21	Shangrao niuxinshi
3	Yudu wuhebingshi	22	Shangrao fangshi
4	Yudu niuxinshi	23	Shangrao yuansi
5	Ganzhou xiaofangshi	24	Shangrao niaoshi
6	Nankang yuansi	25	Shangrao youshi
7	Nankang dahongshi	26	Shangrao yeshi
8	Huichang yeshi	27	Poyang banshi
9	Huichang wuheshi	28	Poyang niunaishi
10	Huichang youshi	29	Poyang yeshi
11	Ganxian panboshi	30	Qingni wuzhishi
12	Gaoan fangshi	31	Qingni fangshi
13	Gaoan wuhefangshi	32	Fuzhou bangshi
14	Gaoan xiaofangshi	33	Yudu fengyeshi
15	Gaoan yeshi	34	Yudu luofushi
16	Wanzai wuheshi	35	Yudu houpishi
17	Wanzai yeshi	36	Fuzhou heishi
18	Yifeng dongshi	37	Nankang junqianzi
19	Yifeng yeshi		

Table S2 Analysis of persimmon orchard soil physical and chemical properties in Nanchang City, Jiangxi Province.

Soil depth (cm)	pH	Organic matter (g/kg)	Total nitrogen (%)	Total phosphorus (%)	Total potassium (%)	Hydrolyzable nitrogen (mg/kg)	Available phosphorus (mg/kg)	Fast-acting potassium (mg/kg)
0–20	6.567	26.833	0.176	0.176	1.623	46.433	80.533	472.667
20–40	6.450	16.700	0.095	0.129	1.447	26.533	48.567	350.667

Table S3 The primers used in this study.

Gene	Primer	Primer sequence (5'-3')
<i>DkActin</i>	qRT-DkActin-F	CACCACTCAACCCAAAGG
	qRT-DkActin-R	CCAGAATCCAGGACAATAC
<i>DkWRKY3</i>	qRT-DkWRKY3-F	GTCACCGTCACGGCCAAGGAC
	qRT-DkWRKY3-R	AAGCTGGAGACTAGAGTCATG
<i>DkWRKY5</i>	qRT-DkWRKY5-F	TGAACAGGATGAACACCGAGA
	qRT-DkWRKY5-R	TTCTTGATCTCCAAACAGCA
<i>DkWRKY7</i>	qRT-DkWRKY7-F	GGTTACAGAAATGGGCCCTTA
	qRT-DkWRKY7-R	GCTCTGCAATCCATCTCGAGC
<i>DkWRKY8</i>	qRT-DkWRKY8-F	TAGAATGTGGAACAGAGTTC
	qRT-DkWRKY8-R	TGGCATGACCTTGCACAGCAT
<i>DkCBF</i>	qRT-DkCBF-F	GGGAGGAAGAAGTTCACGGAG
	qRT-DkCBF-R	GAGTCGGCGAAATTGAGACAA
<i>DkANR</i>	qRT-DkANR-F	AGAAGGGCTACGCCGTCAACA
	qRT-DkANR-R	ACCAGGTACATCCTGCAATG
<i>DkLAR</i>	qRT-DkLAR-F	CTCAGGTCTTCTAAAGCCAA
	qRT-DkLAR-R	GTCCCGGATGCTGTCACCGCC
<i>DkANS</i>	qRT-DkANS-F	CATTGACCTCAAAGACCTTGA
	qRT-DkANS-R	AAGGCATGCCGGCAGCCTTG
<i>DkDFR</i>	qRT-DkDFR-F	GCAGCCTGGGAGGCAGCTAAA
	qRT-DkDFR-R	TTGCTTATGATTGACTAGTG
<i>DkLAC</i>	qRT-DkLAC-F	CTGTCGTCGAAGTCGATGCCA
	qRT-DkLAC-R	GTATTGTCGAAACCGATGGT

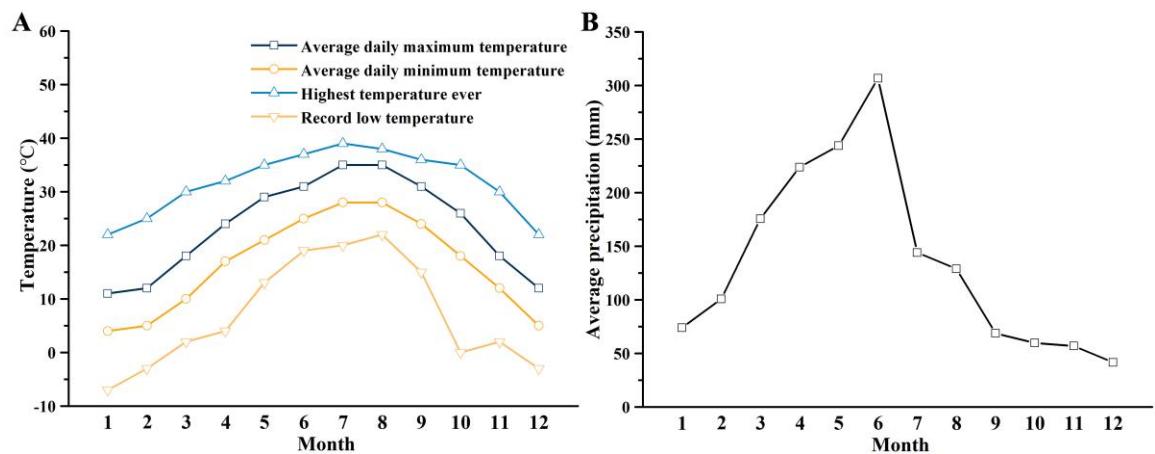


Figure S1. Annual average climatic conditions change in Nanchang City, Jiangxi Province (2020). **A**, temperature, **B**, precipitation.

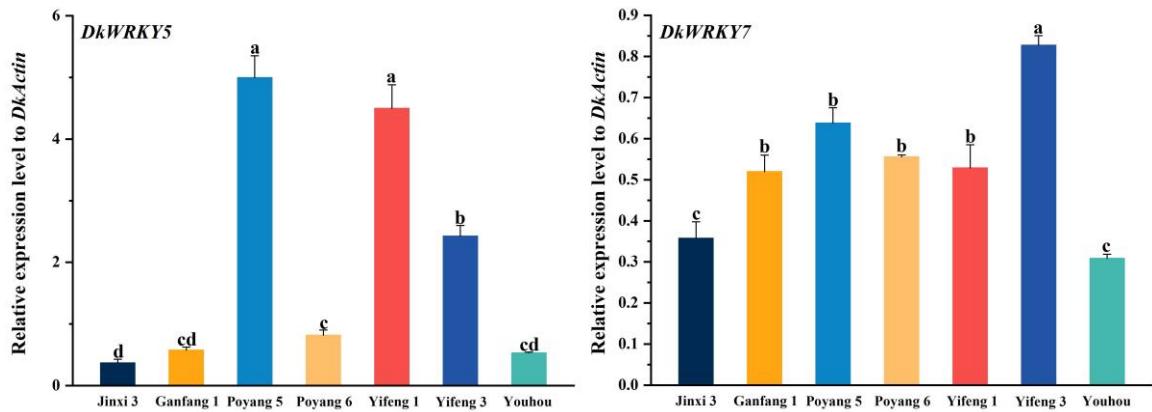


Figure S2. Expression of the *DkWRKY5* and *DkWRKY7* genes in different persimmon varieties. Means with different letters indicate significant differences at $p < 0.05$ by Tukey's test.

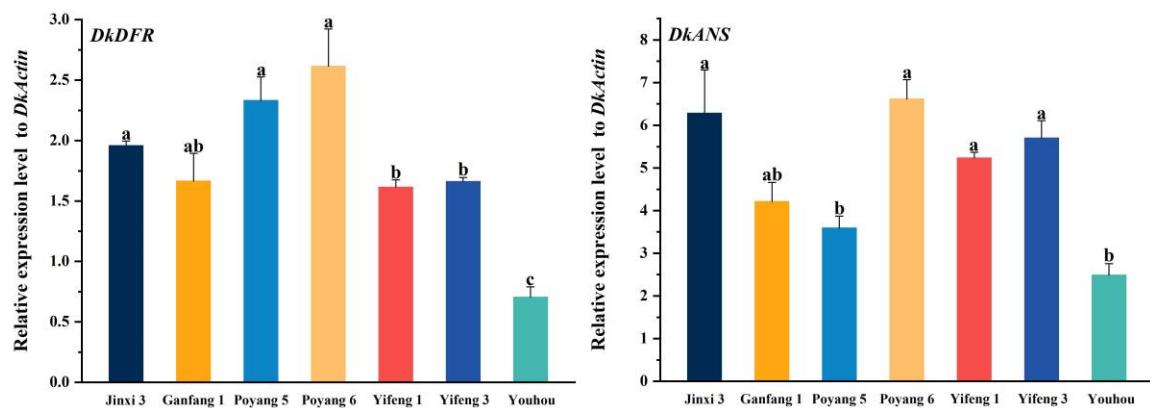


Figure S3. Expression of the *DkDFR* and *DkANS* genes involved in PA pathway in different persimmon varieties. Means with different letters indicate significant differences at $p < 0.05$ by Tukey's test.