

Determination of yield and biochemical characteristics of turmeric (*Curcuma longa* L.) grown in subtropical climate zone

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Electronic Supplementary Material (ESM)

The authors are fully responsible for both the content and the formal aspects of the electronic supplementary material. No editorial adjustments were made.

Table S1. Correlation table between parameters

		Plant height	Number of shoots	Shoot diameter	Leaf area	Mean leaf length	Mean leaf width	Max. leaf width	Growth rate	Fresh weight	Dry weight	Total flavonoid	Total phenolic	Antioxidant activity	Curcumin	Essential oil content	ar-turmerone	α -turmerone	β -turmerone
Plant height	Pearson corr.	1	-0.126	0.305	0.104	0.693*	0.194	0.217	-0.176	0.257	0.206	0.333	0.329	-0.253	0.698*	-0.510	0.503	-0.451	-0.529
	Sig. (2-tailed)		0.696	0.335	0.747	0.012	0.546	0.497	0.584	0.420	0.521	0.290	0.297	0.428	0.012	0.090	0.095	0.141	0.077
	N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Number of shoots	Pearson corr.	-0.126	1	0.124	0.703*	0.046	-0.594*	-0.565	0.179	0.516	0.532	0.353	0.205	-0.259	-0.092	-0.115	-0.306	0.249	0.263
	Sig. (2-tailed)	0.696		0.701	0.011	0.886	0.042	0.055	0.577	0.086	0.075	0.260	0.523	0.417	0.775	0.721	0.334	0.436	0.409
	N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Shoot diameter	Pearson corr.	0.305	0.124	1	0.270	0.220	-0.124	-0.111	-0.275	0.362	0.262	0.530	0.456	-0.418	0.316	-0.105	0.052	-0.104	-0.058
	Sig. (2-tailed)	0.335	0.701		0.396	0.492	0.702	0.732	0.388	0.248	0.412	0.076	0.136	0.176	0.316	0.746	0.872	0.748	0.857
	N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Leaf area	Pearson corr.	0.104	0.703*	0.270	1	0.485	0.027	0.090	0.038	0.828**	0.790**	0.279	0.424	-0.432	0.244	-0.221	-0.152	0.053	0.089
	Sig. (2-tailed)	0.747	0.011	0.396		0.110	0.934	0.780	0.907	0.001	0.002	0.380	0.169	0.161	0.445	0.491	0.638	0.870	0.782
	N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Mean leaf length	Pearson corr.	0.693*	0.046	0.220	0.485	1	0.276	0.349	-0.047	0.658*	0.622*	0.047	0.398	-0.304	0.691*	-0.606*	0.372	-0.185	-0.479
	Sig. (2-tailed)	0.012	0.886	0.492	0.110		0.384	0.266	0.884	0.020	0.031	0.886	0.200	0.337	0.013	0.037	0.234	0.565	0.115
	N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Mean leaf width	Pearson corr.	0.194	-0.594*	-0.124	0.027	0.276	1	0.975**	-0.361	0.013	-0.017	-0.304	-0.122	0.099	0.099	0.103	0.196	-0.310	-0.206
	Sig. (2-tailed)	0.546	0.042	0.702	0.934	0.384		0.000	0.249	0.968	0.959	0.337	0.706	0.761	0.760	0.749	0.541	0.326	0.521
	N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Max. leaf width	Pearson corr.	0.217	-0.565	-0.111	0.090	0.349	0.975**	1	-0.332	0.125	0.095	-0.187	0.029	-0.067	0.159	0.108	0.111	-0.202	-0.135
	Sig. (2-tailed)	0.497	0.055	0.732	0.780	0.266	0.000		0.292	0.699	0.770	0.561	0.929	0.835	0.622	0.737	0.732	0.529	0.675
	N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Growth rate	Pearson corr.	-0.176	0.179	-0.275	0.038	-0.047	-0.361	-0.332	1	-0.110	-0.087	-0.272	-0.349	0.223	-0.211	-0.211	0.085	0.166	-0.141
	Sig. (2-tailed)	0.584	0.577	0.388	0.907	0.884	0.249	0.292		0.734	0.787	0.393	0.266	0.487	0.511	0.510	0.793	0.605	0.661
	N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Fresh weight	Pearson corr.	0.257	0.516	0.362	0.828**	0.658*	0.013	0.125	-0.110	1	0.982**	0.404	0.634*	-0.541	0.381	-0.310	-0.157	0.228	0.024
	Sig. (2-tailed)	0.420	0.086	0.248	0.001	0.020	0.968	0.699	0.734		0.000	0.193	0.027	0.069	0.222	0.327	0.625	0.477	0.941
	N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12

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Table S1 to be continued

		Plant height	Number of shoots	Shoot diameter	Leaf area	Mean leaf length	Mean leaf width	Max. leaf width	Growth rate	Fresh weight	Dry weight	Total flavonoid	Total phenolic	Antioxidant activity	Curcumin	Essential oil content	ar-turmerone	α-turmerone	β-turmerone
Dry weight	Pearson corr.	0.206	0.532	0.262	0.790**	0.622*	-0.017	0.095	-0.087	0.982**	1	0.399	0.615*	-0.550	0.319	-0.296	-0.222	0.303	0.074
	Sig. (2-tailed)	0.521	0.075	0.412	0.002	0.031	0.959	0.770	0.787	0.000		0.199	0.033	0.064	0.311	0.351	0.489	0.338	0.818
	N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Total flavonoid	Pearson corr.	0.333	0.353	0.530	0.279	0.047	-0.304	-0.187	-0.272	0.404	0.399	1	0.750**	-0.828**	0.281	0.045	-0.343	0.176	0.342
	Sig. (2-tailed)	0.290	0.260	0.076	0.380	0.886	0.337	0.561	0.393	0.193	0.199		0.005	0.001	0.377	0.889	0.276	0.584	0.276
	N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Total phenolic	Pearson corr.	0.329	0.205	0.456	0.424	0.398	-0.122	0.029	-0.349	0.634*	0.615*	0.750**	1	-0.896**	0.570	-0.055	-0.322	0.225	0.321
	Sig. (2-tailed)	0.297	0.523	0.136	0.169	0.200	0.706	0.929	0.266	0.027	0.033	0.005		0.000	0.053	0.865	0.308	0.482	0.309
	N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Antioxidant activity	Pearson corr.	-0.253	-0.259	-0.418	-0.432	-0.304	0.099	-0.067	0.223	-0.541	-0.550	-0.828**	-0.896**	1	-0.366	-0.085	0.468	-0.333	-0.450
	Sig. (2-tailed)	0.428	0.417	0.176	0.161	0.337	0.761	0.835	0.487	0.069	0.064	0.001	0.000		0.242	0.793	0.125	0.290	0.142
	N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Curcumin	Pearson corr.	0.698*	-0.092	0.316	0.244	0.691*	0.099	0.159	-0.211	0.381	0.319	0.281	0.570	-0.366	1	-0.729**	0.577*	-0.562	-0.544
	Sig. (2-tailed)	0.012	0.775	0.316	0.445	0.013	0.760	0.622	0.511	0.222	0.311	0.377	0.053	0.242		0.007	0.050	0.057	0.067
	N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Essential oil content	Pearson corr.	-0.510	-0.115	-0.105	-0.221	-0.606*	0.103	0.108	-0.211	-0.310	-0.296	0.045	-0.055	-0.085	-0.729**	1	-0.794**	0.596*	0.839**
	Sig. (2-tailed)	0.090	0.721	0.746	0.491	0.037	0.749	0.737	0.510	0.327	0.351	0.889	0.865	0.793	0.007		0.002	0.041	0.001
	N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
α-turmerone	Pearson corr.	0.503	-0.306	0.052	-0.152	0.372	0.196	0.111	0.085	-0.157	-0.222	-0.343	-0.322	0.468	0.577*	-0.794**	1	-0.874**	-0.973**
	Sig. (2-tailed)	0.095	0.334	0.872	0.638	0.234	0.541	0.732	0.793	0.625	0.489	0.276	0.308	0.125	0.050	0.002		0.000	0.000
	N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
β-turmerone	Pearson corr.	-0.451	0.249	-0.104	0.053	-0.185	-0.310	-0.202	0.166	0.228	0.303	0.176	0.225	-0.333	-0.562	0.596*	-0.874**	1	0.768**
	Sig. (2-tailed)	0.141	0.436	0.748	0.870	0.565	0.326	0.529	0.605	0.477	0.338	0.584	0.482	0.290	0.057	0.041	0.000		0.004
	N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
BetaTumor	Pearson corr.	-0.529	0.263	-0.058	0.089	-0.479	-0.206	-0.135	-0.141	0.024	0.074	0.342	0.321	-0.450	-0.544	0.839**	-0.973**	0.768**	1
	Sig. (2-tailed)	0.077	0.409	0.857	0.782	0.115	0.521	0.675	0.661	0.941	0.818	0.276	0.309	0.142	0.067	0.001	0.000	0.004	
	N	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12

*,**correlation is significant at the 0.05 and 0.01 level (2-tailed)