

**Table S1.** Analysis of variance calculated for the vegetative parameters of two cultivars (Hybrid and French) of marigold plants.

Variables	Variation Source	SS	DF	MS	F	P
Plant height	Treatment	204.92	4	51.231	23.89	<0.0001***
	Cultivar	152.911	1	152.91	71.308	<0.0001***
	Treatment× Cultivar	24.227	4	6.056	2.827	<0.0001***
	Error	42.887	20	2.144	-	-
Leaves length	Treatment	37.459	4	9.364	28.554	<0.0001***
	Cultivar	9.701	1	9.701	29.581	<0.0001***
	Treatment× Cultivar	0.473	4	0.118	0.361	<0.0001***
	Error	6.559	20	0.328	-	-
Number of leaves plant <sup>-1</sup>	Treatment	1358.59	4	339.65	11.831	<0.0001***
	Cultivar	51.54	1	51.54	1.795	0.195
	Treatment× Cultivar	1.44	4	0.36	0.012	<0.0001***
	Error	574.13	20	28.71	-	-
Stem thickness	Treatment	38.462	4	9.615	53.718	<0.0001***
	Cultivar	1.365	1	1.365	7.628	0.012**
	Treatment× Cultivar	0.084	4	0.021	0.118	0.974
	Error	3.580	20	0.179	-	-

**Table S2.** Analysis of variance calculated for the floral parameters of two cultivars (Hybrid and French) of marigold plants.

Variables	Variation Source	SS	DF	MS	F	P
Bloom flower plant <sup>-1</sup>	Treatment	72.84	4	18.21	94.51	0.0008***
	Cultivar	1.976	1	1.976	10.25	0.004***
	Treatment× Cultivar	0.225	4	0.0563	0.292	0.879
	Error	3.853	20	0.197	-	-
Flower height	Treatment	99.893	4	24.973	23.829	<0.0001***
	Cultivar	2.028	1	2.028	1.935	0.179
	Treatment× Cultivar	0.085	4	0.023	0.02	0.999
	Error	20.96	20	1.048	-	-
Flower diameter	Treatment	92.126	4	23.031	99.457	<0.0001***
	Cultivar	4.5008	1	4.5008	19.435	0.0002***
	Treatment× Cultivar	0.34	4	0.085	0.367	0.8291
	Error	4.631	20	0.231	-	-
Number of petals plant <sup>-1</sup>	Treatment	1886.08	4	471.521	20.545	<0.0001***
	Cultivar	1559.523	1	1559.523	67.952	<0.0001***
	Treatment× Cultivar	58.105	4	14.523	0.632	<0.0001***
	Error	459.006	20	22.95	-	-
Flower nodes	Treatment	97.196	4	24.299	12.169	<0.0001***
	Cultivar	15.465	1	15.465	7.745	0.011*
	Treatment× Cultivar	1.541	4	0.385	0.193	0.939
	Error	39.935	20	1.996	-	-
Fresh weight of flower	Treatment	241.575	4	60.393	59.209	<0.0001***
	Cultivar	29.8	1	29.8	29.216	<0.0001***
	Treatment× Cultivar	18.495	4	4.624	4.533	0.009***
	Error	20.4	20	1.02	-	-
Dry weight of flower	Treatment	1.301	4	0.325	52.254	<0.0001***
	Cultivar	0.156	1	0.156	25.208	<0.0001***
	Treatment× Cultivar	0.093	4	0.023	3.731	0.02*
	Error	0.124	20	0.006	-	-

**Table S3.** Analysis of variance calculated for the total phenolic, carotenoids, and flavonoid contents from flower extraction of marigold (Cvs. Hybrid and French).

Variables	Variation Source	SS	DF	MS	F	P
Total phenolic compound contents	Treatment	1453.944	1	1453.944	76.02	<0.0001***
	Cultivar	2753.065	4	688.266	35.987	<0.0001***
	Treatment× Cultivar	239.329	4	59.832	3.128	0.03*
	Error	382.506	20	19.125	-	-
Total carotenoids content	Treatment	3.201	1	3.201	6.373	0.0201**
	Cultivar	98.327	4	24.582	48.935	<0.0001***
	Treatment× Cultivar	5.645	4	1.411	2.810	0.05*
	Error	10.047	20	0.502	-	-
Total flavonoid content	Treatment	0.032	1	0.032	11.96	0.002**
	Cultivar	0.433	4	0.108	40.422	<0.0001***
	Treatment× Cultivar	0.015	4	0.003	1.471	0.05*
	Error	0.053	20	0.002	-	-

**Table S4.** Analysis of variance calculated for the activities of superoxide dismutase, peroxidase, and catalase.

Variables	Variation Source	SS	DF	MS	F	P
Superoxide dismutase	Treatment	167922	1	167922	4.955	0.037*
	Cultivar	863310	4	215827	0.636	0.042*
	Treatment× Cultivar	236232	4	59058	0.174	0.05*
	Error	6777429	20	338871	-	-
Peroxidase	Treatment	1062332	1	1062332	14.726	0.001***
	Cultivar	818337	4	204584	2.836	0.051*
	Treatment× Cultivar	134683	4	33671	0.466	0.03*
	Error	1442774	20	72139	-	-
Catalase	Treatment	40266	1	40266	0.72	0.403
	Cultivar	698694	4	174674	3.154	0.036*
	Treatment× Cultivar	177861	4	44465	0.803	0.04*
	Error	1107493	20	55375	-	-