

Table S1. Meteorological data for the experimental site (temperature and precipitation) during conducting experiments in 2019-2020 and 2021-2022.

Month	Year	MTmax (°C)	MTmin (°C)	MTmean (°C)	Mean precipitation (mm)
November	2019	17.5	5.1	11.3	0.6
	2021	16.7	5.0	10.8	0.5
December	2019	10.7	0.3	5.5	0.7
	2021	13.9	0.5	7.2	0.2
January	2020	11.9	-3.4	4.2	0
	2022	12.1	-1.0	5.5	0.4
February	2020	16.1	1.5	8.8	0.5
	2022	15.0	1.6	8.3	0.6
March	2020	15.8	5.8	10.8	1.1
	2022	19.4	5.8	12.6	0.3
April	2020	19.6	7.6	13.6	1.0
	2022	27.5	12.2	19.8	0.1
May	2020	29.6	14.6	22.1	0.1
	2022	30.2	13.4	21.8	0

MTmax; Mean of maximum temperature per month. MTmin: Mean of minimum temperature per month. MTmean; Mean of temperature per month.

Table S2. Results of combined ANOVA (mean squares) of DPPH radical scavenging assay, MDA, H₂O₂, non-enzymatic and enzymatic antioxidants in 21 genotypes of barley for normal and drought stress conditions (2 Environments)

Source of variation	df	DPPH	MDA	H ₂ O ₂	TPC	TFC	CAT	APX	POX
Environment (E)	1	2131.04**	403.54**	1.74**	292.00*	210.76**	3.96**	1.20*	18.05**
Replication (E)	2	0.30	0.22	0.003	5.60	0.10	0.02	0.02	0.17
Genotype (G)	20	329.08**	1.62**	0.09**	121.54**	24.52**	0.12**	0.26**	7.32**
G × E	20	517.77**	1.63**	0.06**	55.94*	10.26**	0.11**	0.10**	2.94**
Residual	40	18.68	0.14	0.002	29.02	1.85	0.006	0.01	0.17
CV (%)		8.02	9.06	4.37	8.60	7.03	12.21	10.16	11.61

DPPH: 2, 2-Diphenyl-1-picryl-hydrazyl- hydrate. MDA: Leaf malondialdehyde content. H₂O₂: Hydrogen peroxide. TPC: Total phenolic content. TFC: Total flavonoid content. CAT: Catalase activities. APX: Ascorbate peroxidase activities. POX: Peroxidase activities.

ns Not significant

*Significant at 0.05 level of probability

**Significant at 0.01 level of probability

Table S3. Results of combined ANOVA (mean squares) of physiological properties and grain yield in 21 genotypes of barley for normal and drought stress conditions (2 Environments)

Source of variation	df	Chla	Chlb	Tchl	Chla/b	Car	F _v /F _m	F ₀	F _m	RWC	EL	PC	Pro	GY
Environment (E)	1	1.33**	0.34*	3.02**	0.58 ^{ns}	0.005 ^{ns}	0.39**	4046.30**	225164.30**	4438.55*	5151.76 ^{ns}	4.84**	70.60**	2610167.21**
Replication (E)	2	0.003	0.01	0.009	0.13	0.11	0.000005	21.15	248.87	222.79	599.80	0.04	0.05	4822.34
Genotype (G)	20	0.12**	0.04**	0.27**	0.20 ^{ns}	0.020**	0.001**	180.44*	1988.29**	182.00*	443.21**	0.56**	1.44**	29196.39**
G × E	20	0.07*	0.01**	0.13**	0.14 ^{ns}	0.010*	0.001**	53.67 ^{ns}	502.60 ^{ns}	89.73 ^{ns}	123.74 ^{ns}	0.56**	1.38**	14272.82**
Residual	40	0.03	0.006	0.03	0.18	0.005	0.0004	78.43	835.69	94.14	123.35	0.02	0.06	10758.22
CV (%)		11.76	12.99	9.05	16.03	11.69	3.03	15.11	16.63	18.42	29.19	7.01	14.14	18.09

Chla: Chlorophyll a content. Chlb: Chlorophyll b content. Tchl: Total chlorophyll content. Chla/b: Ratio of chla to chlb. Car: Carotenoid content. F_v/F_m: Maximal quantum efficiency of photosystem II. F₀: Minimum Chl fluorescence. F_m: Maximum Chl fluorescence. RWC: Relative water content EL: Electrolyte leakage. PC: Total protein content. Pro: Proline content. GY: Grain yield.

^{ns} Not significant

*Significant at 0.05 level of probability

**Significant at 0.01 level of probability.

Table S4. Means of genotypes under each of normal and drought stress conditions (G*E means) for DPPH radical scavenging assay, MDA, H₂O₂, non-enzymatic and enzymatic antioxidants.

Genotype	DPPH			MDA			H ₂ O ₂			TPC		
	C	S	M	C	S	M	C	S	M	C	S	M
1	53.04	65.71	59.37	3.10	8.38	5.74	1.08	1.45	1.26	60.59	69.87	65.23
2	60.72	80.66	70.69	1.61	6.25	3.93	0.96	0.96	0.96	60.66	73.45	67.06
3	26.81	84.59	55.70	1.44	5.98	3.71	1.01	1.65	1.33	69.90	68.92	69.41
4	42.75	39.13	40.94	2.27	7.00	4.63	0.95	1.77	1.36	73.29	77.85	75.57
5	50.43	68.73	59.58	2.72	5.32	4.02	1.05	1.27	1.16	66.70	61.13	63.92
6	15.80	62.38	39.10	1.50	7.86	4.68	0.95	1.19	1.07	59.34	70.50	64.92
7	31.44	58.00	44.72	1.56	9.26	5.41	1.06	1.25	1.16	72.18	70.96	71.60
8	33.62	66.31	49.97	2.96	5.91	4.43	0.96	1.17	1.07	62.00	63.91	62.96
9	25.51	58.30	41.90	3.62	6.21	4.91	1.12	1.96	1.54	56.50	70.12	63.31
10	47.68	53.49	50.59	1.23	5.42	3.33	0.93	1.02	0.98	48.43	56.79	52.61
11	51.74	65.61	58.68	1.48	6.94	4.21	0.97	1.44	1.20	55.98	63.93	59.96
12	45.51	62.12	53.81	1.75	5.92	3.84	0.95	1.18	1.06	55.85	63.36	59.61
13	56.81	66.37	61.59	1.94	6.88	4.41	0.99	1.42	1.20	59.68	59.31	59.49
14	68.12	47.27	57.69	1.63	7.07	4.35	0.96	1.47	1.21	66.30	61.71	64.01
15	72.61	60.26	66.43	2.66	5.47	4.07	1.02	1.00	1.01	45.37	66.66	56.02
16	62.03	22.82	42.42	2.39	6.16	4.27	1.04	1.24	1.14	60.13	50.05	55.09
17	63.21	50.55	56.89	2.73	5.52	4.13	1.05	1.06	1.05	60.72	60.93	60.82
18	58.11	63.10	60.61	1.25	5.36	3.31	0.94	0.95	0.98	54.27	58.82	56.55
19	65.36	63.75	64.55	1.64	5.82	3.73	0.93	1.15	1.04	65.83	64.10	64.97
20	57.10	46.51	51.80	1.17	5.38	3.28	0.96	1.01	0.98	62.31	60.73	61.52
21	36.81	51.09	43.95	1.66	6.25	3.96	0.96	1.26	1.11	59.87	61.12	60.50
LSD ($\alpha=0.05$)			6.18			0.54			0.07			7.70
LSD G*E means ($\alpha=0.05$)	8.73			0.77			0.10			10.89		

Table S4. continued

Genotype	TFC			CAT			APX			POX		
	C	S	M	C	S	M	C	S	M	C	S	M
1	19.08	23.56	21.32	0.98	0.49	0.73	0.89	1.13	1.01	2.86	5.06	3.96
2	16.18	23.46	19.82	0.71	0.26	0.48	1.05	0.70	0.87	4.74	5.25	4.99
3	19.07	24.90	21.99	0.94	0.08	0.51	0.74	1.10	0.92	3.91	5.93	4.92
4	22.35	21.38	21.87	0.84	0.72	0.78	1.55	1.17	1.36	2.19	1.82	2.00
5	15.90	14.95	15.42	0.98	0.70	0.84	1.68	1.14	1.41	4.84	3.31	4.07
6	14.95	14.60	14.77	1.01	0.54	0.78	1.39	0.70	1.05	2.82	3.76	3.29
7	23.93	20.26	22.09	0.58	0.94	0.76	0.84	1.06	0.95	2.39	2.16	2.27
8	13.91	15.85	14.88	0.75	1.07	0.91	1.06	0.91	0.98	4.97	3.89	4.43
9	14.26	20.48	17.37	1.26	0.72	0.99	1.73	1.55	1.64	3.55	6.68	5.12
10	13.99	20.16	17.07	0.82	0.55	0.68	0.89	0.58	0.73	2.03	2.63	2.33
11	17.48	22.26	19.87	1.11	0.37	0.74	1.19	0.81	1.00	2.72	2.31	2.51
12	18.91	24.98	21.95	0.66	0.28	0.47	1.01	0.62	0.81	1.53	2.42	1.98
13	20.70	22.18	21.44	0.88	0.23	0.55	1.13	1.04	1.08	1.95	1.95	1.95
14	19.13	23.09	21.11	0.56	0.33	0.45	1.07	1.39	1.23	1.65	5.05	3.35
15	12.29	21.47	16.88	0.72	0.09	0.40	0.89	0.64	0.76	3.33	3.94	5.13
16	16.22	19.21	17.72	1.06	0.42	0.74	0.77	0.85	0.81	3.04	3.31	3.18
17	18.00	22.58	20.29	0.92	0.42	0.67	1.20	0.74	0.97	3.39	7.26	5.33
18	16.52	20.04	18.28	1.09	0.14	0.61	1.38	0.59	0.98	5.06	7.77	6.41
19	21.78	21.73	21.75	0.94	0.48	0.71	1.21	0.69	0.95	2.89	3.63	3.26
20	19.49	20.96	20.22	0.77	0.12	0.45	0.64	0.31	0.48	2.19	2.52	2.35
21	18.75	21.31	20.03	0.62	0.14	0.38	1.05	0.65	0.85	3.29	1.17	2.23
LSD ($\alpha=0.05$)			1.94			0.11			0.14			0.59
LSD G*E means ($\alpha=0.05$)	2.75			0.16			0.20			0.84		

DPPH: 2, 2-Dipheny-1-picryl-hydrazyl- hydrate. MDA: Leaf malondialdehyde content. H₂O₂: Hydrogen peroxide. TPC: Total phenolic content. TFC: Total flavonoid content. CAT: Catalase activities. APX: Ascorbate peroxidase activities. POX: Peroxidase activities.

Table S5. Means of genotypes under each of normal and drought stress conditions (G*E means) for physiological properties and grain yield.

Genotype	Chla			Chlb			Tchl			Chla/b		
	C	S	M	C	S	M	C	S	M	C	S	M
1	1.50	1.36	1.43	0.55	0.48	0.51	2.04	1.84	1.94	2.74	2.83	2.79
2	2.28	1.02	1.15	0.46	0.35	0.40	1.74	1.37	1.55	2.83	2.95	2.89
3	1.64	0.80	1.22	0.65	0.33	0.49	2.29	1.13	1.71	2.53	2.52	2.53
4	1.74	1.28	1.51	0.67	0.61	0.64	2.41	1.89	2.15	2.62	2.11	2.36
5	1.65	1.44	1.54	0.61	0.48	0.55	2.26	1.93	2.09	2.72	2.97	2.84
6	1.88	1.57	1.72	0.77	0.58	0.68	2.65	2.15	2.40	2.47	2.70	2.58
7	1.60	1.62	1.61	0.60	0.59	0.60	2.20	2.22	2.21	2.66	2.75	2.70
8	1.61	1.55	1.58	0.65	0.43	0.54	2.26	1.98	2.12	2.50	3.61	3.05
9	1.80	1.34	1.57	0.76	0.51	0.63	2.56	1.85	2.20	2.40	2.69	2.54
10	1.83	1.56	1.69	0.76	0.62	0.69	2.59	2.18	2.38	2.42	2.56	2.49
11	1.65	1.17	1.41	0.66	0.47	0.56	2.31	1.63	1.97	2.61	2.51	2.56
12	1.82	1.25	1.53	0.72	0.55	0.64	2.54	1.80	2.17	2.53	2.28	2.41
13	1.67	1.11	1.39	0.66	0.39	0.52	2.33	1.50	1.92	2.60	2.88	2.74
14	1.34	1.36	1.35	0.50	0.51	0.51	1.84	1.88	1.86	2.69	2.65	2.67
15	1.22	1.27	1.25	0.49	0.40	0.44	1.71	1.67	1.69	2.51	3.20	2.85
16	1.58	1.66	1.62	0.70	0.80	0.75	2.29	2.45	2.37	2.25	2.08	2.17
17	1.58	1.66	1.52	0.69	0.51	0.60	2.77	1.97	2.12	2.29	2.91	2.60
18	1.52	1.09	1.31	0.57	0.34	0.46	2.09	1.44	1.76	2.94	3.17	3.05
19	1.52	1.18	1.35	0.60	0.42	0.51	2.12	1.61	1.86	2.52	2.79	2.65
20	1.65	1.79	1.72	0.64	0.82	0.73	2.29	2.61	2.45	2.58	2.18	2.38
21	1.77	1.68	1.72	0.73	0.58	0.65	2.50	2.26	2.38	2.42	2.95	2.68
LSD ($\alpha=0.05$)			0.25			0.11			0.27			0.61
LSD G*E means ($\alpha=0.05$)	0.35			0.15			0.38			0.86*		

Table S5. continued

Genotype	Car			F _v /F _m			F ₀			F _m		
	C	S	M	C	S	M	C	S	M	C	S	M
1	0.60	0.62	0.61	0.71	0.60	0.65	70.50	44.50	57.50	241.00	110.00	175.50
2	0.50	0.48	0.49	0.70	0.61	0.65	73.00	43.50	58.25	242.50	111.50	177.00
3	0.66	0.43	0.55	0.68	0.57	0.62	71.50	57.00	64.25	221.00	134.50	177.75
4	0.67	0.59	0.63	0.70	0.62	0.66	76.00	56.50	66.25	258.00	148.50	203.25
5	0.64	0.63	0.63	0.70	0.59	0.65	69.50	59.00	64.25	233.00	144.50	188.75
6	0.71	0.70	0.71	0.71	0.57	0.64	46.00	33.00	39.50	160.50	76.00	118.25
7	0.62	0.74	0.68	0.70	0.55	0.63	53.00	46.00	49.50	177.00	104.00	140.50
8	0.63	0.57	0.60	0.71	0.55	0.63	73.50	50.50	62.00	252.00	112.50	182.25
9	0.71	0.60	0.66	0.72	0.52	0.62	64.50	48.00	56.25	231.00	101.00	166.00
10	0.75	0.71	0.73	0.70	0.61	0.65	69.50	55.50	62.50	231.00	141.00	186.00
11	0.64	0.52	0.58	0.71	0.54	0.62	65.00	51.00	58.00	222.50	111.50	167.00
12	0.69	0.58	0.63	0.72	0.62	0.67	67.50	57.00	62.25	240.50	153.50	197.00
13	0.62	0.50	0.56	0.72	0.53	0.63	55.00	52.00	53.50	196.50	112.00	154.25
14	0.52	0.62	0.57	0.72	0.56	0.64	47.00	48.50	47.75	172.50	110.00	141.25
15	0.45	0.55	0.50	0.70	0.56	0.63	64.00	50.50	57.25	216.50	114.00	165.25
16	0.64	0.79	0.71	0.71	0.52	0.62	61.50	52.00	56.75	213.50	109.50	161.50
17	0.64	0.70	0.67	0.70	0.54	0.62	74.50	53.00	63.75	246.00	116.00	181.00
18	0.58	0.52	0.55	0.72	0.56	0.64	67.50	54.50	61.00	245.50	125.50	185.50
19	0.59	0.55	0.57	0.72	0.63	0.67	72.00	64.00	68.00	255.50	172.50	214.00
20	0.65	0.79	0.72	0.71	0.57	0.64	65.00	55.00	60.00	225.50	129.00	177.25
21	0.68	0.70	0.69	0.72	0.57	0.65	70.50	54.00	62.25	255.50	125.50	190.50
LSD ($\alpha=0.05$)	0.10			0.03			12.66			41.31		
LSD G*E means ($\alpha=0.05$)	0.15			0.04			17.90*			58.42*		

Table S5. continued

Genotype	RWC			EL			PC			Pro			GY		
	C	S	M	C	S	M	C	S	M	C	S	M	C	S	M
1	70.13	44.97	57.55	27.95	41.31	34.63	2.42	1.33	1.87	0.41	2.21	1.31	795.32	529.17	662.25
2	53.30	35.89	44.60	27.89	37.54	32.72	1.63	1.24	1.44	0.49	2.14	1.31	634.61	362.60	498.60
3	63.10	35.19	49.15	57.13	38.11	47.62	1.75	1.17	1.46	0.90	2.60	1.75	894.43	258.93	576.68
4	57.57	37.14	47.36	26.67	52.40	39.54	1.80	2.20	2.00	1.11	4.53	2.82	709.65	284.10	496.88
5	69.43	44.19	56.81	65.33	71.09	68.21	2.94	2.06	2.50	0.79	1.88	1.34	771.23	367.80	569.52
6	53.79	46.85	50.32	27.04	45.08	36.06	1.23	2.77	2.00	0.76	3.65	2.21	809.00	503.91	656.46
7	58.40	47.62	53.01	17.86	43.83	30.85	1.80	2.64	2.22	0.46	3.42	1.94	721.40	362.90	542.15
8	67.45	47.75	57.60	26.68	45.71	36.19	2.03	2.11	2.07	0.99	2.38	1.69	651.14	421.24	536.19
9	61.53	47.99	54.76	37.29	56.89	47.09	3.46	1.66	2.56	1.57	2.48	2.03	753.53	395.18	574.36
10	62.50	43.16	52.83	45.87	64.67	55.27	2.88	2.23	2.55	1.03	4.34	2.69	581.88	233.25	407.56
11	53.38	44.38	48.88	20.32	48.67	34.49	2.17	1.58	1.87	1.12	2.56	1.84	956.36	474.90	715.63
12	61.07	47.25	54.16	11.96	29.15	20.55	1.69	1.73	1.71	0.60	1.05	0.82	752.46	323.41	537.93
13	56.68	40.69	48.68	30.26	47.49	38.88	2.09	1.45	1.77	0.48	1.39	0.94	823.11	328.97	576.04
14	67.10	66.33	66.72	41.52	46.67	44.10	1.61	1.24	1.43	1.14	1.54	1.34	625.38	268.79	447.08
15	83.01	54.16	68.59	17.79	39.24	28.52	1.69	1.02	1.35	0.15	3.71	1.93	539.72	328.36	434.04
16	56.58	28.13	42.35	30.83	44.21	37.52	2.51	1.51	2.01	0.70	4.38	2.54	624.47	501.86	563.17
17	54.30	44.16	49.23	29.73	35.47	32.60	1.97	1.44	1.71	0.99	4.38	2.69	860.80	542.74	701.77
18	46.53	48.48	47.50	35.28	41.97	38.63	2.64	1.07	1.85	1.47	1.53	1.50	716.93	535.11	626.02
19	61.86	54.35	58.11	16.23	34.51	25.37	2.47	1.56	2.01	0.55	2.24	1.39	816.78	507.01	661.90
20	55.24	51.44	53.34	25.46	57.14	41.30	2.02	1.38	1.70	0.48	1.64	1.06	866.91	403.47	635.19
21	45.49	43.03	44.26	15.31	42.17	28.74	1.65	0.99	1.32	0.79	1.44	1.12	833.97	401.78	617.88
LSD ($\alpha=0.05$)			13.87			15.87			0.19			0.35			148.23
LSD G*E	19.61*			22.44*			0.27			0.49			209.62		
means ($\alpha=0.05$)															

Chla: Chlorophyll a content. Chlb: Chlorophyll b content. Tchl: Total chlorophyll content. Chl a/b: Ratio of chla to chlb. Car: Carotenoid content. F_v/F_m : Maximal quantum efficiency of photosystem II. F_0 : Minimum Chl fluorescence. F_m : Maximum Chl fluorescence. RWC: Relative water content EL: Electrolyte leakage. PC: Total protein content. Pro: Proline content. GY: Grain yield. * Not significance of interaction between genotype and environment.

Table S6. Results of combined ANOVA (mean squares) for the phenolic acids and flavonoids in 21 genotypes of barley for normal and drought stress conditions (2 Environments)

Source of variation	df	Syringic acid	Gallic acid	Chlorogenic acid	Caffeic acid	Ellagic acid	Ferulic acid	Vanillic acid	<i>p</i> -Coumaric acid	Luteolin	Apigenin	Rutin
Environment (E)	1	65.35**	59.08*	0.07 ^{ns}	367.39**	2251153.95**	132.35**	89075.04**	385.40**	0.56**	38.00**	6826.86**
Replication (E)	2	0.17	0.68	1.33	1.004	1079.35	1.30	0.13	2.95	0.001	0.13	6.02
Genotype (G)	20	304.60**	14.73**	85.72**	546.38**	308689.95**	1139.55**	106599.43**	485.84**	0.27**	99.91**	41917.69**
G × E	20	37.46**	14.05**	46.13**	259.56**	131674.45**	276.32**	167204.68**	122.00**	0.27**	8.12**	8772.37**
Residual	40	0.13	0.18	0.25	2.50	1611.22	1.95	83.25	1.31	0.0005	0.18	102.60
CV (%)		11.08	12.70	13.97	13.89	10.05	8.51	7.15	5.21	27.15	6.01	6.08

ns Not significant

*Significant at 0.05 level of probability

**Significant at 0.01 level of probability

Table S7. Means of genotypes under each of normal and drought stress conditions (G*E means) for phenolic acids and flavonoid contents of the leaves.

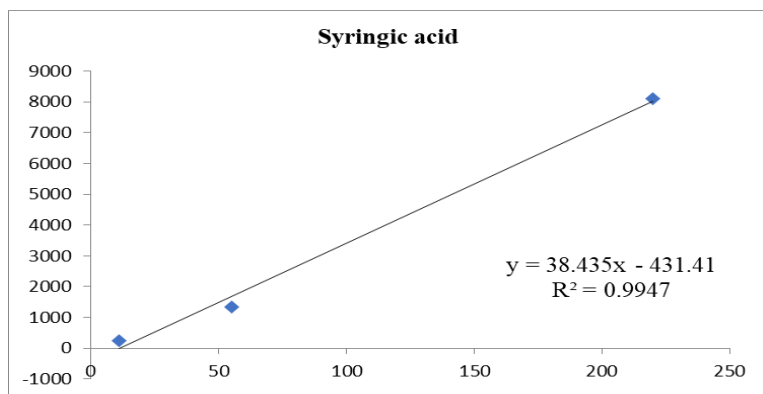
Genotype	Syringic acid			Gallic acid			Chlorogenic acid			Caffeic acid		
	C	S	M	C	S	M	C	S	M	C	S	M
1	nd	nd	0	2.605	1.663	2.13	nd	nd	0	18.869	21.517	20.19
2	nd	nd	0	0.825	0.934	0.88	6.598	4.638	5.62	35.338	nd	17.67
3	nd	nd	0	1.316	2.805	2.06	nd	nd	0	16.563	15.007	15.78
4	nd	27.75	13.88	2.534	4.484	3.51	nd	nd	0	36.792	19.377	28.08
5	23.74	27.69	25.71	1.788	2.701	2.24	nd	nd	0	37.975	15.695	26.83
6	nd	nd	0	2.355	4.580	3.47	7.052	7.767	7.41	15.463	24.574	20.02
7	nd	nd	0	3.730	8.966	6.35	nd	nd	0	nd	nd	0
8	nd	nd	0	3.774	5.551	4.66	5.701	14.433	10.07	29.274	nd	14.64
9	27.32	32.67	30.00	5.709	5.436	5.57	10.586	11.310	10.95	44.162	34.632	39.40
10	nd	nd	0	3.036	3.342	3.19	nd	nd	0	nd	25.432	12.72
11	nd	nd	0	6.372	nd	3.19	nd	nd	0	nd	nd	0
12	nd	nd	0	nd	2.104	1.05	nd	3.539	1.77	nd	nd	0
13	nd	nd	0	nd	nd	0	nd	nd	0	nd	nd	0
14	nd	nd	0	4.353	11.564	7.96	nd	nd	0	nd	nd	0
15	nd	nd	0	nd	5.859	2.93	nd	nd	0	nd	nd	0
16	nd	nd	0	nd	4.259	2.13	3.679	9.359	6.52	nd	nd	0
17	nd	nd	0	5.827	nd	2.91	nd	5.803	2.90	nd	25.806	12.90
18	nd	nd	0	1.577	7.446	4.51	nd	10.840	5.42	14.571	13.117	13.84
19	nd	nd	0	nd	6.568	3.28	nd	nd	0	nd	nd	0
20	nd	nd	0	nd	5.370	2.68	20.930	nd	10.46	33.986	nd	16.99
21	nd	nd	0	7.116	4.508	5.81	21.235	6.831	14.03	nd	nd	0
LSD ($\alpha=0.05$)			0.52			0.61			0.71			2.26
LSD G*E means ($\alpha=0.05$)	0.74			0.86			1.01			3.19		

Table S7. continued

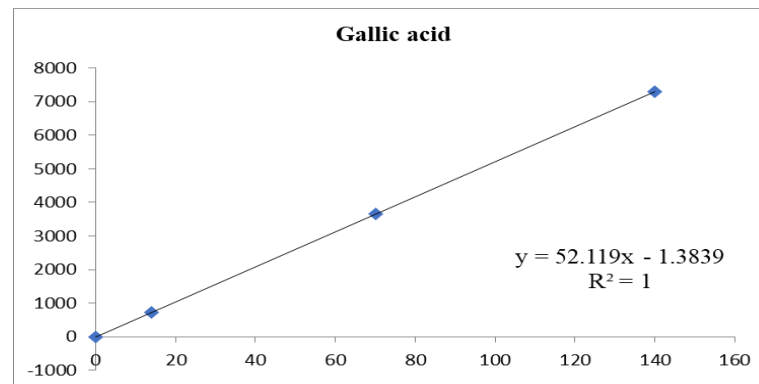
Genotype	Ellagic acid			Ferulic acid			Vanillic acid			p-Coumaric acid		
	C	S	M	C	S	M	C	S	M	C	S	M
1	231.312	537.780	384.55	nd	nd	0	nd	nd	0	8.03	6.35	7.19
2	372.842	1489.041	930.94	nd	11.10	5.55	17.29	147.42	82.36	31.50	40.74	36.12
3	292.548	689.951	491.25	nd	nd	0	nd	nd	0	7.32	11.97	9.64
4	168.204	561.254	364.73	12.57	64.79	38.68	nd	nd	0	7.87	6.27	7.07
5	34.436	108.734	405.26	57.78	84.74	71.26	15.98	17.66	16.82	36.45	34.38	35.42
6	305.148	505.371	71.59	13.38	nd	6.69	13.33	15.22	14.27	24.18	33.79	28.98
7	212.275	980.295	596.29	nd	nd	0	nd	nd	0	7.49	9.02	8.26
8	350.232	1481.793	916.01	10.79	13.17	11.98	15.34	18.46	16.90	32.02	47.48	39.75
9	547.017	892.077	719.55	12.95	16.05	14.50	15.23	13.54	14.38	32.66	33.32	32.99
10	100.764	229.660	165.21	12.17	13.48	12.83	nd	nd	0	13.94	17.03	15.49
11	53.943	nd	26.97	nd	nd	0	15.08	16.62	15.85	6.23	15.54	10.88
12	nd	34.108	17.05	30.81	13.16	21.98	nd	nd	0	11.55	4.95	8.25
13	150.525	35.225	92.88	37.83	0	18.91	nd	nd	0	27.91	15.86	21.88
14	nd	258.866	129.43	13.46	13.56	13.51	nd	874.58	437.29	14.73	40.72	27.72
15	226.126	785.05	505.59	27.82	32.24	30.03	336.76	nd	168.38	19.87	23.85	21.86
16	162.168	588.078	375.12	13.35	22.56	17.95	313.74	13.59	163.67	17.46	19.04	18.25
17	213.792	648.764	431.28	14.27	15.97	15.12	579.81	14.14	296.98	31.75	11.85	21.80
18	508.511	257.607	383.06	14.49	17.43	15.96	nd	650.24	325.12	14.38	42.45	28.41
19	151.024	145.928	145.98	nd	nd	0	nd	839.91	419.96	30.38	34.96	32.67
20	704.113	866.904	785.51	14.13	15.10	14.62	nd	740.55	370.28	33.59	36.13	34.86
21	163.662	732.77	448.22	32.79	37.96	35.38	671.68	nd	335.84	7.54	21.11	14.32
LSD ($\alpha=0.05$)			57.36	2.00			13.04			1.64		
LSD G*E means ($\alpha=0.05$)			81.12	2.83			18.44			2.32		

Table S7. continued									
Genotype	Luteolin			Apigenin			Rutin		
	C	S	M	C	S	M	C	S	M
1	nd	nd	0	15.95	12.66	14.31	251.142	369.286	310.21
2	nd	1.542	0.77	12.04	11.50	11.77	294.531	187.753	241.14
3	nd	nd	0	11.65	10.29	10.97	183.884	226.517	205.20
4	nd	nd	0	10.29	9.46	9.87	303.782	65.066	184.42
5	nd	nd	0	11.06	10.09	10.57	270.298	369.702	320.00
6	nd	nd	0	11.09	10.11	10.60	220.934	245.003	232.97
7	nd	nd	0	13.88	9.26	11.57	212.068	287.479	249.77
8	nd	nd	0	9.11	nd	4.55	121.953	21.633	71.79
9	nd	nd	0	8.75	9.40	9.08	154.311	306.419	230.36
10	nd	nd	0	9.58	10.44	10.01	284.850	302.544	293.70
11	nd	nd	0	10.08	10.31	10.19	242.614	300.731	271.67
12	nd	nd	0	9.52	9.02	9.27	42.359	141.858	92.11
13	nd	nd	0	9.92	10.00	9.96	290.221	247.063	268.64
14	nd	nd	0	nd	nd	0	19.905	125.862	72.88
15	nd	nd	0	nd	nd	0	nd	nd	0
16	nd	1.897	0.95	nd	nd	0	92.749	31.479	62.11
17	nd	nd	0	9.44	10.41	9.92	81.429	41.075	61.25
18	nd	nd	0	nd	nd	0	13.754	133.075	73.41
19	nd	nd	0	nd	nd	0	71.993	121.266	96.63
20	nd	nd	0	8.84	nd	4.42	117.614	119.566	118.59
21	nd	nd	0	nd	nd	0	36.901	42.549	39.72
LSD ($\alpha=0.05$)			0.03			0.60			14.48
LSD G*E means ($\alpha=0.05$)		0.04			0.85			20.47	
nd Not detected									

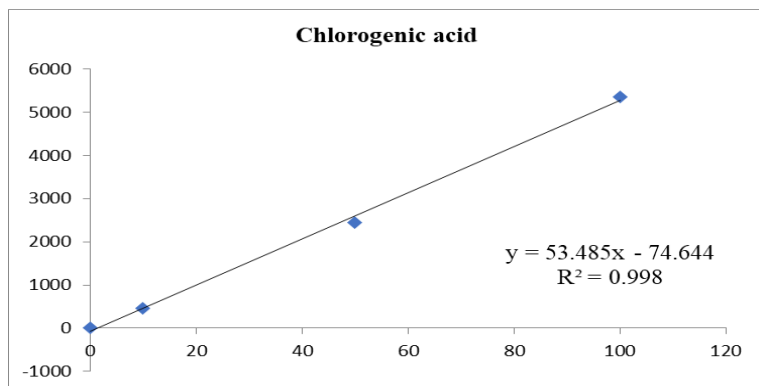
Fig. S1. Calibration curves for polyphenolic compounds standards: a) Syringic acid, b) Gallic acid, c) Chlorogenic acid, d) Caffeic acid, e) Ellagic acid, f) Ferulic acid, g) Vanillic acid, h) *p*-Coumaric acid, i) Luteolin, j) Apigenin, k) Rutin.



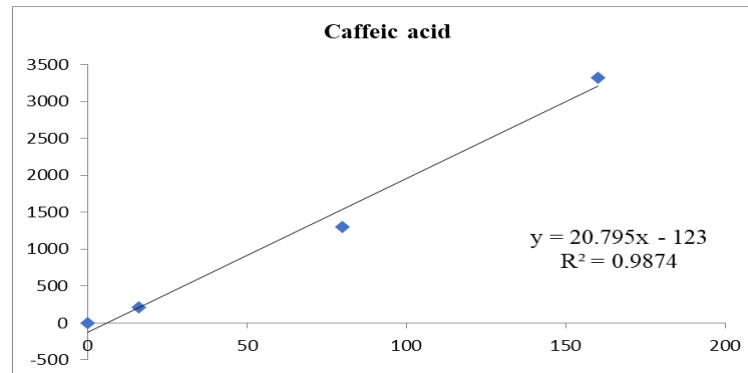
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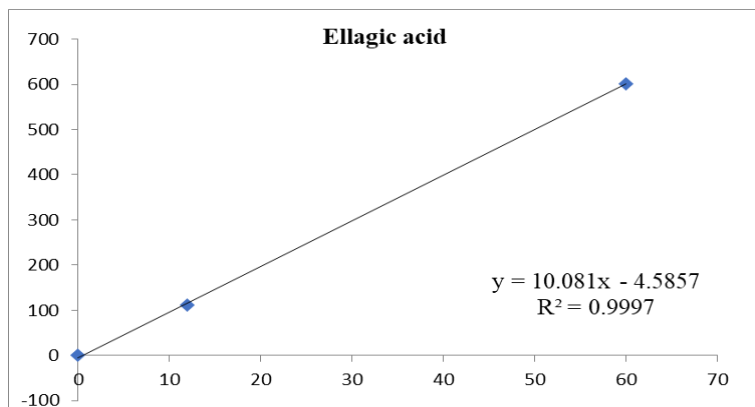
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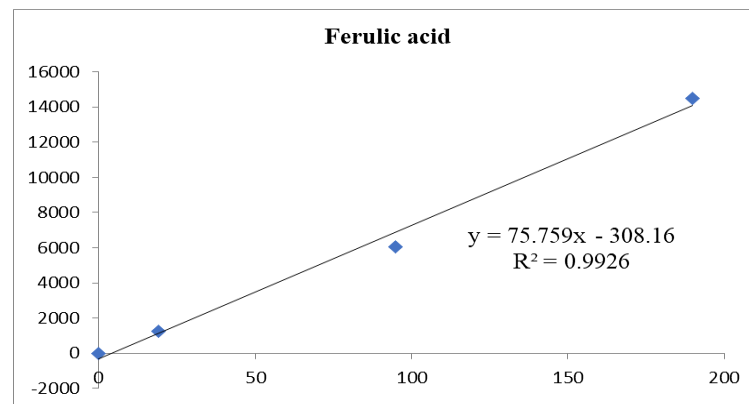
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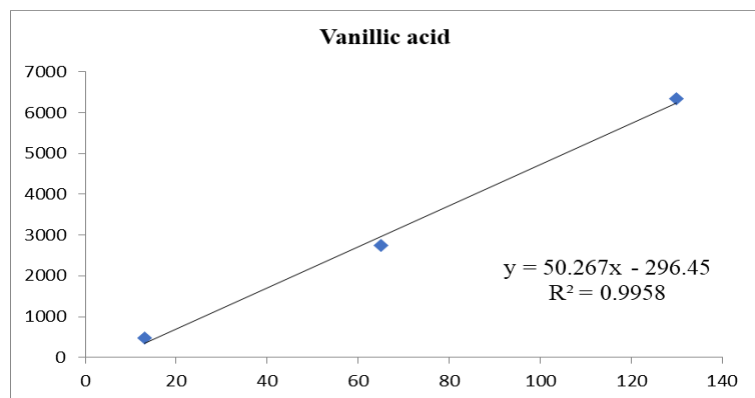
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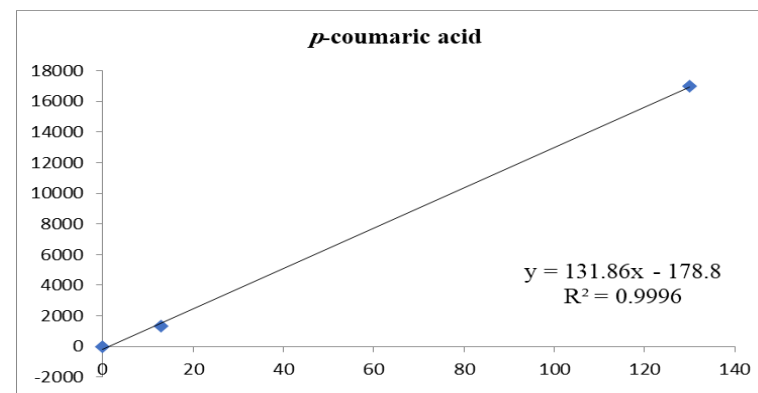
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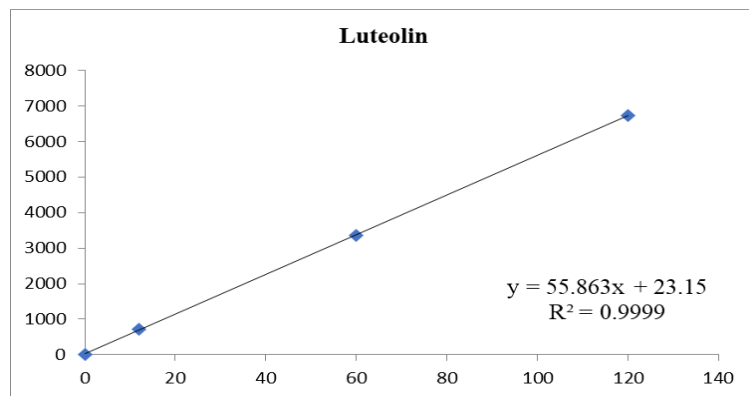
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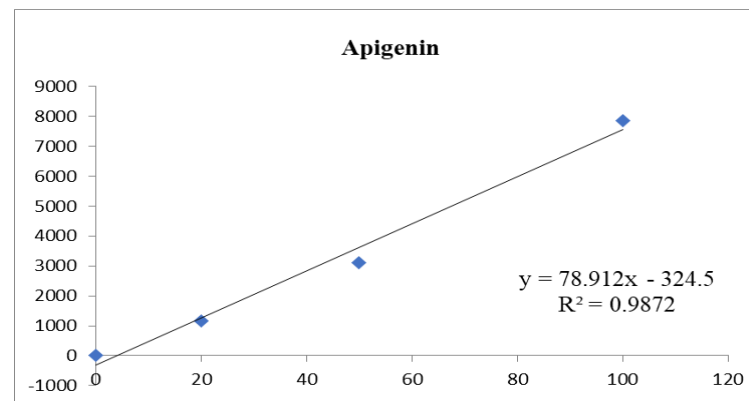
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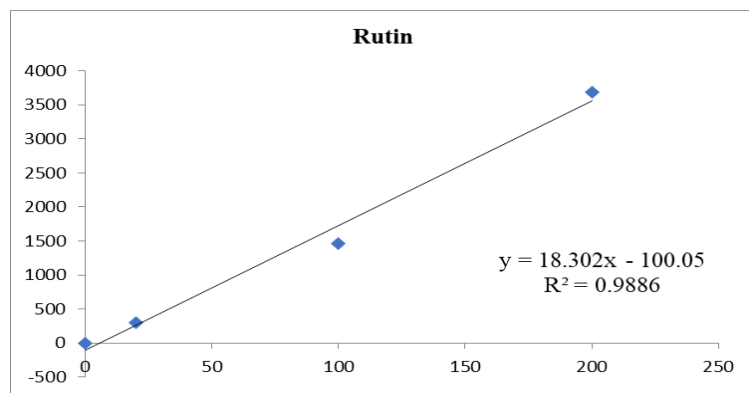
(h)



(i)



(j)



(k)

Fig. S2. Heat map diagram showing the phenolic compounds studied in 21 genotypes of barley under normal conditions. Dark blue color indicates the least amounts of characters, and dark red indicates the most ones. The units are expressed as milligrams per 100 grams of dry weight (mg 100 g⁻¹ DW).

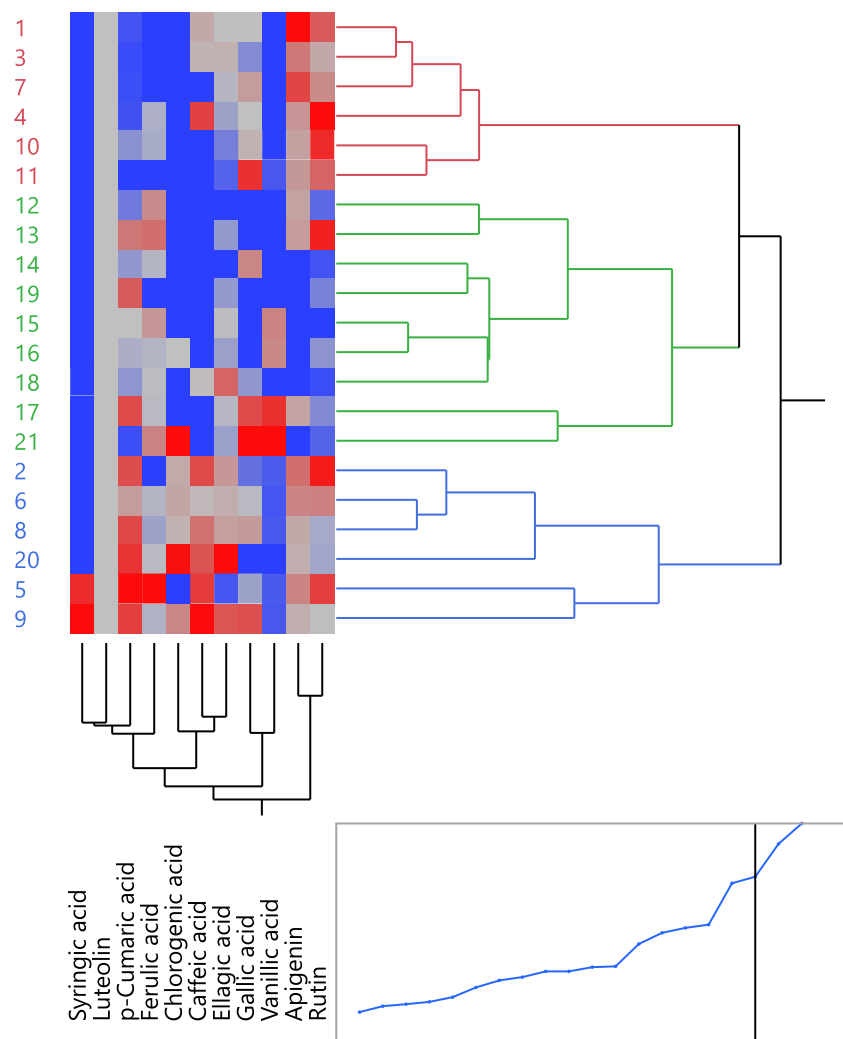


Fig. S3. Heat map diagram showing the phenolic compounds studied in 21 genotypes of barley under drought stress conditions. Dark blue color indicates the least amounts of characters, and dark red indicates the most ones. The units are expressed as milligrams per 100 grams of dry weight (mg 100 g⁻¹ DW).

