

Genetic variability for aluminium tolerance in sunflower (*Helianthus annuus* L.)

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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. Classification of the sunflower genotypes

Sr. No.	Genotypes	RRG G mean $\pm$ SE	RTI	GR ₅₀	Fi	Reaction to Al	Rank	Cluster
1	MR-1	3.86 $\pm$ 0.75 ⁿ	0.406	0.82	0.425	MT	3	V
2	MR-06	0.38 $\pm$ 0.20 ^v	0.000	0.00	0.000	HS	5	I
3	RHA-271	1.04 $\pm$ 0.34 ^u	0.185	0.50	0.259	S	4	I
4	RHA-265	4.63 $\pm$ 0.91 ^{ij}	0.432	0.86	0.446	MT	3	V
5	RHA-274	5.00 $\pm$ 0.89 ^h	0.447	0.91	0.472	MT	3	V
6	RHA-856	1.18 $\pm$ 0.38 ^t	0.200	0.50	0.259	S	4	I
7	HRHA-5-3	4.31 $\pm$ 0.86 ^k	0.416	0.83	0.430	MT	3	V
8	HRHA-271-P ₃	4.24 $\pm$ 0.79 ^k	0.438	0.88	0.456	MT	3	V
9	RHA-297-P ₃	4.56 $\pm$ 0.76 ^j	0.480	0.95	0.492	T	2	IV
10	RHA-297-P ₂	2.93 $\pm$ 0.75 ^q	0.317	0.68	0.378	MT	3	III
11	RHA-298-P ₃	6.48 $\pm$ 1.10 ^c	0.434	1.17	0.606	T	2	V
12	RHA-3	3.49 $\pm$ 0.82 ^p	0.353	0.73	0.368	MT	3	III
13	Nandyal-1	3.83 $\pm$ 0.87 ^{no}	0.375	0.76	0.394	MT	3	V
14	IB-4	3.99 $\pm$ 0.82 ^{lm}	0.397	0.80	0.415	MT	3	V
15	IB-43	3.43 $\pm$ 0.82 ^p	0.343	0.73	0.378	MT	3	III
16	ACC-350-2	1.66 $\pm$ 0.35 ^r	0.344	0.69	0.358	S	4	III
17	MSF-2-16	6.95 $\pm$ 0.94 ^b	0.487	1.34	0.694	T	2	IV
18	MSF-1-4	3.80 $\pm$ 0.66 ^{no}	0.469	0.91	0.472	MT	3	IV
19	MSF-1-7	5.24 $\pm$ 0.92 ^g	0.466	0.92	0.477	MT	3	IV
20	AH-14	5.16 $\pm$ 0.67 ^g	0.558	1.16	0.601	T	2	II

Table S1 to be continued

Sr. No.	Genotypes	RRG G mean $\pm$ SE	RTI	GR_{50}	Fi	Reaction to Al	Rank	Cluster
21	IHT-201	1.38 ± 0.44^s	0.206	0.53	0.275	S	4	I
22	IHT-298	5.87 ± 0.71^e	0.563	1.20	0.622	T	2	II
23	HB-15	3.91 ± 1.14^{mn}	0.289	0.64	0.332	S	4	III
24	NDR-2	4.62 ± 0.84^j	0.438	0.89	0.461	MT	3	V
25	DRSF-160 R	4.09 ± 0.69^l	0.464	0.90	0.466	MT	3	IV
26	RHA-298	0.33 ± 0.17^v	0.000	0.00	0.000	HS	5	I
27	GPB-07	3.72 ± 0.79^o	0.391	0.78	0.404	MT	3	V
28	GPB-51	5.51 ± 0.71^f	0.536	1.12	0.580	T	2	IV
29	GPB-61	4.76 ± 0.68^i	0.507	1.04	0.539	T	2	IV
30	1-OH-04-29	5.92 ± 0.28^e	0.629	1.38	0.715	T	2	II
31	1-OH-07-41	3.46 ± 0.68^p	0.403	0.81	0.420	MT	3	V
32	1-OH-07-45	6.20 ± 0.60^d	0.602	1.31	0.679	T	2	II
33	CSFI-5304	6.58 ± 0.87^c	0.491	1.21	0.627	T	2	IV
34	RCR-39	3.53 ± 0.62^p	0.436	0.84	0.435	MT	3	V
35	LSF-902	5.00 ± 0.71^h	0.519	1.04	0.539	T	2	IV
36	NDLR-06	10.51 ± 1.08^a	0.655	1.54	0.798	HT	1	II
37	EC-152673	3.66 ± 0.77^i	0.382	0.78	0.404	MT	3	V
38	EC-512681	3.65 ± 0.64^i	0.444	0.86	0.446	MT	3	V
39	EC-512684	3.87 ± 0.80^h	0.406	0.82	0.425	MT	3	V
40	EC-512686	5.31 ± 0.86^b	0.483	0.96	0.497	T	2	IV
41	EC-512687	2.73 ± 0.65^l	0.333	0.71	0.352	S	4	III
42	EC-601746	4.27 ± 0.80^f	0.427	0.85	0.440	MT	3	V
43	EC-601747	3.23 ± 0.79^j	0.344	0.71	0.368	MT	3	III
44	EC-601751	5.19 ± 0.79^c	0.488	0.99	0.513	T	2	IV
45	EC-601755	5.38 ± 0.63^b	0.563	1.21	0.627	T	2	II
46	EC-601800	4.13 ± 1.25^g	0.281	0.59	0.306	S	4	III
47	EC-601820	4.56 ± 0.83^e	0.443	0.87	0.451	MT	3	V
48	EC-601861	7.05 ± 0.65^a	0.652	1.93	1.000	HT	1	II
49	EC-601874	3.12 ± 0.63^k	0.379	0.77	0.399	MT	3	V
50	EC-601875	5.03 ± 0.77^d	0.494	0.97	0.503	T	2	IV
	Mean	4.25	0.415	0.89	0.46			
	Minimum	0.33	0.000	0.00	0.00			
	Maximum	10.51	0.652	1.93	1.00			
	SE	0.26	0.019	0.05	0.02			
	CV	42.33	32.562	36.55	36.55			

RRG – root regrowth; SE – standard error; CV – coefficient of variation; Fi – subordinate function values for Al tolerance; RTI – root tolerance index; GR_{50} – growth inhibition rate; different small letters indicate that mean values are significantly different at 95% confidence interval