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Supplementary file

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Table S1. The mean interaction effect of line and herbicide concentration for the trait number of days to budding

Herbicide concentration	Line								
	1	2	3	4	5	6	7	8	9
0.0	34	31	31	36	34	31	31	34	31
1.2	50	31	31	47	33	50	31	34	34
2.4	50	33	38	47	39	34	39	39	33
4.8	50	31	36	36	31	33	31	36	36
9.6	54	33	43	36	36	36	36	34	33
19.2	54	54	41	50	50	41	47	36	47
38.4	54	50	50	55	55	38	47	34	50

Table S2. Variance analysis of line effect on days to budding at 76.8 mM concentration

Source of Variation	D.F.	Mean Square
Line	2	800.0**
Experimental Error	6	0.00
CV (%)	-	0.00

** means significant at a 1% probability level

Table S3. The mean of lines for the trait of day to budding at the concentration of 76.8 mM herbicide

Line	Days to Budding
5	54[a]
8	34[b]
9	54[a]
Total	47.33

Table S4. Number of seedlings used in different concentrations and lines for days to budding

Line	1	2	3	4	5	6	7	8	9
The number of seedlings	23	26	24	21	24	24	24	24	9
Herbicide Concentration	0.0	1.2	2.4	4.8	9.6	19.2	38.4	76.8	153.6
The number of seedlings	30	30	30	27	27	27	27	23	24

Table S5. Variance analysis of line effect and glyphosate herbicide concentration on water evaporation pressure

Source of Variation	D.F.	Mean Square
Line	9	5.43**
Herbicide Concentration	8	41.44**
Line × Herbicide Concentration	58	3.3**
Experimental Error	149	0.44
CV (%)	-	3.90

** means significant at a 1% probability level

Table S6. Mean interaction effect of line and herbicide concentration for water source partial pressure trait (kPa)

Herbicide	Line									
concentration	1	2	3	4	5	6	7	8	9	10
0.0	16.13	15.70	15.50	15.53	15.0	14.97	14.66	13.96	11.46	16.16
1.2	14.30	14.17	13.27	17.13	17.60	16.67	17.00	16.80	15.73	13.76
2.4	18.03	17.80	17.63	17.43	18.13	17.63	16.06	16.0	15.76	17.96
4.8	18.37	18.07	17.77	17.53	17.80	17.83	17.33	17.10	17.13	-
9.6	18.93	17.60	17.73	17.77	17.56	17.53	17.73	17.20	17.26	-
19.2	18.23	18.10	17.83	17.40	17.33	17.17	17.50	17.83	18.73	-
38.4	18.83	18.57	18.10	17.93	18.13	17.43	17.53	17.76	17.83	-
76.8	19.50	19.30	19.27	-	19.03	18.73	19.16	16.43	15.05	-
153.6	-	19.00	19.10	-	-	-	-	-	-	-

Table S7. Number of seedlings used in different concentrations and lines for CO_2 source

Line	1	2	3	4	5	6	7	8	9
The number of seedlings	23	26	24	21	24	24	24	24	9
Herbicide Concentration	0.0	1.2	2.4	4.8	9.6	19.2	38.4	76.8	153.6
The number of seedlings	30	30	30	27	27	27	27	23	2

Table S8. Variance analysis of line effect and glyphosate herbicide concentration on CO_2 source

Source of Variation	D.F.	Mean Square
Line	9	29.86**
Herbicide Concentration	8	286.61**
Line × Herbicide Concentration	57	42.78**
Experimental Error	148	6.65
CV (%)	-	0.65

** means significant at a 1% probability level

Table S9. Mean interaction effect of line and herbicide concentration for CO_2 source trait (ppm) (SE = 1.49)

Herbicide	Line									
concentration	1	2	3	4	5	6	7	8	9	10
0.0	390.0	390.0	394.0	389.0	388.0	387.0	388.0	388.6	394.0	391.0
1.2	394.6	394.6	397.3	397.0	393.3	393.0	393.6	400.0	391.3	392.0
2.4	396.6	400.0	339.8	396.0	399.6	395.6	392.3	392.3	392.6	394.0
4.8	401.0	399.6	394.6	396.6	394.6	400.0	401.3	400.3	399.0	-
9.6	392.6	393.3	393.3	391.6	393.0	392.0	394.3	395.3	394.0	-
19.2	394.6	390.6	392.3	397.6	416.3	393.0	398.3	391.0	391.3	-
38.4	388.3	386.3	386.6	386.0	386.0	387.6	389.0	391.0	390.0	-
76.8	391.0	391.6	395.0	-	397.0	387.0	392.0	391.0	389.3	-
153.6	-	388.0	-	-	-	-	-	-	-	-

Table S10. Number of seedlings used in different concentrations and lines for photosynthetic active radiation

Line	1	2	3	4	5	6	7	8	9
The number of seedlings	23	26	24	21	24	24	24	24	9
Herbicide Concentration	0.0	1.2	2.4	4.8	9.6	19.2	38.4	76.8	153.6
The number of seedlings	30	30	30	27	27	27	27	23	2

Table S11. Variance analysis of line effect and glyphosate herbicide concentration on photosynthetic active radiation trait

Source of Variation	D.F.	Mean Square
Line	9	14240.34**
Herbicide Concentration	8	139527.77**
Line × Herbicide Concentration	57	10.325.04**
Experimental Error	148	5466.17
CV (%)	-	14.78

** means significant at a 1% probability level

Table S12. Mean interaction effect of line and herbicide concentration for photosynthetically active radiation trait (mmol m^{-2} s^{-1}) (SE=42.68)

Herbicide	Line									
concentration	1	2	3	4	5	6	7	8	9	10
0.0	338	268.6	427.3	451.6	460.3	534.6	327.0	374.6	402.6	349.3
1.2	347	272.6	326.3	328.0	409.6	531.6	524.3	444.0	392.6	415.3
2.4	584	551.3	466.0	530.6	562.3	598.0	577.6	549.6	533.3	606.3
4.8	566	600.6	559.3	549.0	494.0	587.3	560.6	541.3	617.6	-
9.6	546.3	533.6	564.6	567.6	572.0	588.0	535.6	585.3	584.6	-
19.2	532.6	569.0	558.0	596.3	611.0	613.3	566.6	579.6	565.0	-
38.4	384	481.3	473.3	533.3	489.3	539.6	524.3	496.3	513.6	-
76.8	536.5	576.6	536.3	-	586.0	506.0	426.0	366.3	319.3	-
153.6	338	541.5	-	-	-	-	-	-	-	-

Table S13. Number of seedlings used in different concentrations and lines for leaf surface temperature

Line	1	2	3	4	5	6	7	8	9
The number of seedlings	23	26	24	24	24	24	24	24	10
Herbicide Concentration	0.0	1.2	2.4	4.8	9.6	19.2	38.4	76.8	153.6
The number of seedlings	30	30	30	28	27	27	27	23	4

Table S14. Variance analysis of line effects and glyphosate herbicide concentration on leaf surface temperature

Source of Variation	D.F.	Mean Square
Line	9	530.48**
Herbicide Concentration	8	2282.63**
Line × Herbicide Concentration	58	1458.00**
Experimental Error	149	44.10
CV (%)	-	19.65

** means significant at a 1% probability level

Table S15. Mean interaction effect of line and herbicide concentration for leaf surface temperature (°C) trait

Herbicide	Line									
concentration	1	2	3	4	5	6	7	8	9	10
0.0	29.70	29.20	28.96	28.63	28.66	28.76	28.36	28.26	28.43	29.80
1.2	30.16	28.90	29.43	29.80	13.31	30.90	30.96	30.53	30.03	31.40
2.4	34.56	35.06	34.06	35.26	33.56	34.40	33.50	32.96	31.60	34.96
4.8	36.56	36.16	36.53	35.66	35.63	36.46	36.36	36.23	35.93	-
9.6	38.53	37.40	38.23	37.70	38.96	38.26	38.10	39.00	38.23	-
19.2	39.36	38.06	37.73	37.76	38.13	38.43	38.43	39.26	39.63	-
38.4	39.4	39.00	38.76	38.86	38.33	38.46	38.56	38.56	38.76	-
76.8	33.75	33.40	33.13	-	32.33	32.56	31.06	39.30	39.50	-
153.6	-	34.25	-	-	-	-	-	-	-	-

Table S16. Number of seedlings used in different concentrations and lines for stomatal conductance

Line	Control	1	2	3	4	5	6	7	8	9
The number of seedlings	27	23	26	24	27	27	27	27	26	23
Herbicide Concentration	0.0	1.2	2.4	4.8	9.6	19.2	38.4	76.8	153.6	
The number of seedlings	26	30	30	30	29	30	30	30	29	

Table S17. Variance analysis of line effect and glyphosate herbicide concentration on stomatal conductance trait

Source of Variation	D.F.	Mean Square
Line	9	0.074**
Herbicide Concentration	8	0.226**
Line × Herbicide Concentration	57	0.066ns
Experimental Error	148	0.019
CV (%)	-	7.6

** means significant at a 1% probability level

Table S18. Mean interaction effect of line and herbicide concentration for stomatal conductance trait (mol m^{-2} s^{-1}) (SE = 0.079)

Herbicide	Line									
concentration	1	2	3	4	5	6	7	8	9	10
0.0	0.180	0.333	0.310	0.350	0.173	0.110	0.160	0.257	0.263	0.157
1.2	0.097	0.410	0.070	0.153	0.123	0.167	0.130	0.127	0.133	0.143
2.4	0.233	0.100	0.573	0.183	0.967	0.103	0.153	0.190	1.097	0.207
4.8	0.280	0.113	0.297	0.280	0.107	0.243	0.130	0.177	0.107	-
9.6	0.267	0.083	0.240	0.047	0.170	0.217	0.113	0.243	0.160	-
19.2	0.213	0.153	0.163	0.180	0.167	0.243	0.123	0.207	0.173	-
38.4	0.153	0.140	0.123	0.200	0.170	0.243	0.197	0.257	0.133	-
76.8	0.140	0.210	0.135	-	0.280	0.120	0.387	0.213	0.080	-
153.6	-	0.220	-	-	-	-	-	-	-	-

Table S19. Number of seedlings used in different concentrations and lines for photosynthesis rate.

Line	Control	1	2	3	4	5	6	7	8	9
The number of seedlings	27	23	26	24	21	24	24	24	24	27
Herbicide Concentration	0.0	1.2	2.4	4.8	9.6	19.2	38.4	76.8	153.6	
The number of seedlings	30	30	30	29	30	30	30	26	8	

Table S20. Variance analysis of line effect and glyphosate herbicide concentration on photosynthesis rate

Source of Variation	D.F.	Mean Square
Line	9	817.33**
Herbicide Concentration	8	772.42**
Line × Herbicide Concentration	64	988.04*
Experimental Error	162	1368.38
CV (%)	-	6.02

** means significant at a 1% probability level; * means significant at a 5% probability level

Table S21. The mean interaction effect of line and herbicide concentration for photosynthesis rate trait (µmol m^{-2} s^{-1}) (SE = 46.7).

Herbicide	Line									
concentration	1	2	3	4	5	6	7	8	9	10
0.0	5.79	9.40	9.60	7.51	6.65	4.66	5.88	12.66	9.52	5.65
1.2	4.73	9.06	4.68	4.80	7.53	8.79	7.35	7.24	7.93	5.01
2.4	10.99	7.03	10.07	6.49	13.58	9.16	7.37	8.73	14.07	7.30
4.8	12.16	7.23	10.57	10.06	8.05	6.31	9.49	8.38	9.40	-
9.6	4.83	5.08	9.69	2.93	5.31	3.98	5.25	8.51	7.24	-
19.2	8.52	8.30	5.77	7.43	9.76	3.35	6.97	7.05	6.73	-
38.4	2.79	6.21	5.71	3.66	51.8	6.12	3.01	12.00	6.67	-
76.8	1.36	6.44	3.30	-	9.19	1.46	2.46	6.18	1.66	-
153.6	-	8.87	-	-	-	-	-	-	-	-

Table S22. Number of seedlings used in different concentrations and lines for stomatal resistance.

Line	Control	1	2	3	4	5	6	7	8	9
The number of seedlings	9	23	26	24	21	24	24	24	24	23
Herbicide Concentration	0.0	1.2	2.4	4.8	9.6	19.2	38.4	76.8	153.6	
The number of seedlings	30	30	30	27	27	27	27	23	2	

Table S23. Variance analysis of line effect and glyphosate herbicide concentration on stomatal resistance trait

Source of Variation	D.F.	Mean Square
Line	9	34048.0ns
Herbicide Concentration	8	169410.6**
Line × Herbicide Concentration	57	204158.3ns
Experimental Error	162	353835.6
CV (%)	-	2.69

** means significant at a 1% probability level; ns means not significant

Table S24. Mean interaction effect of line and herbicide concentration for stomatal resistance trait (mol m^{-2} s^{-1}) (SE = 0.084)

Herbicide	Line									
concentration	1	2	3	4	5	6	7	8	9	10
0.0	301.3	299.3	294.6	314.6	296.3	282.6	294.3	263.3	271.0	275.3
1.2	285.3	315.6	253.6	287.6	230.0	263.3	262.0	262.0	255.3	272.6
2.4	256.0	198.3	295.3	215.0	307.3	208.3	261.3	246.6	310.0	282
4.8	266.6	255.0	226.3	276.0	277.0	253.6	241.3	211.6	214.3	-
9.6	276.0	340.3	206.0	282.3	289.6	271.6	309.6	280.0	264.0	-
19.2	581.3	428.6	279.0	277.3	285.3	276.3	291.0	257.3	338.3	-
38.4	389.3	345.6	361.3	314.0	276.6	318.3	354.0	308.6	256.3	-
76.8	353.0	330.0	295.5	-	300.3	351.6	361.3	338.0	311.5	-
153.6	-	260.0	-	-	-	282.6	-	-	-	-