



Supplementary Materials

Table S1. Parameters of mature seed vigor under different treatments of GA₃, 6-BA, IAA.

Treatments	Initial Germination Time	Germination Rate	Germination Power	Germination Index
CK-1	44	0.12	0.1	0.118562
CK-2	48	0.22	0.08	0.199074
CK-3	47	0.14	0.06	0.129458
A1-1	16	0.54	0.2	1.199917
A1-2	18	0.5	0.08	0.989203
A1-3	18	0.5	0.08	0.991329
A2-1	16	0.5	0.22	1.123278
A2-2	15	0.7	0.16	1.468111
A2-3	16	0.62	0.2	1.315034
A3-1	14	0.68	0.26	1.565442
A3-2	16	0.66	0.18	1.435995
A3-3	16	0.58	0.28	1.342183
A4-1	16	0.66	0.28	1.533424
A4-2	16	0.7	0.22	1.610573
A4-3	16	0.82	0.3	1.878788
A5-1	15	0.74	0.32	1.710056
A5-2	16	0.72	0.3	1.713902
A5-3	15	0.72	0.36	1.781642
A6-1	15	0.76	0.34	1.762162
A6-2	15	0.76	0.48	1.915857
A6-3	15	0.76	0.44	1.913642
B1-1	48	0.14	0.06	0.123485
B1-2	57	0.12	0.04	0.102338
B1-3	34	0.18	0.12	0.172836
B2-1	52	0.12	0.08	0.104933
B2-2	46	0.18	0.08	0.158744
B2-3	43	0.16	0.06	0.141598
B3-1	26	0.12	0.1	0.132345
B3-2	48	0.08	0.08	0.075575
B3-3	48	0.18	0.08	0.157309
B4-1	54	0.1	0.06	0.087262
B4-2	55	0.08	0.04	0.069916
B4-3	32	0.14	0.1	0.144228
B5-1	40	0.1	0.08	0.095186
B5-2	48	0.04	0.04	0.041667
B5-3	56	0.06	0.04	0.052642
B6-1	49	0.04	0.04	0.038265
B6-2	55	0.08	0.06	0.071149
B6-3	50	0.14	0.06	0.124388
C1-1	52	0.16	0.1	0.146226
C1-2	53	0.06	0.06	0.055918
C1-3	49	0.14	0.08	0.130045
C2-1	45	0.12	0.1	0.117224
C2-2	54	0.14	0.06	0.125113
C2-3	45	0.2	0.1	0.186067
C3-1	35	0.24	0.2	0.249509
C3-2	52	0.14	0.08	0.127812
C3-3	44	0.1	0.06	0.09631
C4-1	47	0.22	0.18	0.211033
C4-2	37	0.14	0.1	0.137576

C4-3	47	0.2	0.14	0.186225
C5-1	45	0.18	0.06	0.167786
C5-2	45	0.14	0.06	0.128772
C5-3	43	0.18	0.1	0.167887
C6-1	48	0.16	0.08	0.146927
C6-2	32	0.14	0.08	0.140763
C6-3	36	0.22	0.12	0.21222

Note: CK means blank control; A1-A6: soaked seeds treated with 200, 500, 1000, 1500, 2000, 2500 mg·L⁻¹ GA₃, respectively; B1-B6: soaked seeds treated with 20, 50, 100, 200, 500, 1000 mg·L⁻¹ 6-BA, respectively; C1-C6: soaked seeds treated with 20, 50, 100, 200, 500, 1000 mg·L⁻¹ IAA, respectively. The numbers after the dash means each treatment with three repeats, for example, A1-1, A1-2 and A1-3 means we soaked seeds into 200 mg·L⁻¹ GA₃ for three times.

Table S2. Source of difference for the IGT through the Tests of Between-Subjects Effects. Dependent Variable: IGT.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	11,317.522 ^a	8	1414.690	36.010	<0.001
Intercept	57,089.675	1	57,089.675	1453.171	<0.001
Kinds of Plant Growth Regulator	10,868.481	2	5434.241	138.324	<0.001
Concentration Gradient	134.593	5	26.919	0.685	0.637
Error	1885.741	48	39.286		
Total	88,595.000	57			
Corrected Total	13,203.263	56			

^a R Squared = 0.857 (Adjusted R Squared = 0.833).

Table S3. Source of difference for the G through the Tests of Between-Subjects Effects. Dependent Variable: G.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3.432 ^a	8	0.429	98.927	<0.001
Intercept	3.153	1	3.153	727.056	<0.001
Kinds of Plant Growth Regulator	3.326	2	1.663	383.544	<0.001
Concentration Gradient	0.040	5	0.008	1.828	0.125
Error	0.208	48	0.004		
Total	8.915	57			
Corrected Total	3.640	56			

^a R Squared = 0.943 (Adjusted R Squared = 0.933).

Table S4. Source of difference for the GP through the Tests of Between-Subjects Effects. Dependent Variable: GP.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	0.452 ^a	8	0.057	14.809	<0.001
Intercept	0.669	1	0.669	175.173	<0.001
Kinds of Plant Growth Regulator	0.390	2	0.195	51.044	<0.001
Concentration Gradient	0.052	5	0.010	2.701	0.031
Error	0.183	48	0.004		
Total	1.736	57			
Corrected Total	0.636	56			

^a R Squared = 0.712 (Adjusted R Squared = 0.664).

Table S5. Source of difference for the GI through the Tests of Between-Subjects Effects. Dependent Variable: GI.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	24.041 ^a	8	3.005	121.467	<0.001
Intercept	10.009	1	10.009	404.550	<0.001
Kinds of Plant Growth Regulator	23.051	2	11.526	465.853	<0.001
Concentration Gradient	0.437	5	0.087	3.532	0.008
Error	1.188	48	0.025		

Total	43.560	57
Corrected Total	25.229	56

^a R Squared = 0.953 (Adjusted R Squared = 0.945).