

**Table S1. Summary of the numbers of DEG between genotypes.**

Comparison	Condition	A-DEG	D-DEG	Up-regulated	Down-regulated	Total
EUP vs Mix	Mock-2day	1807	3410	2331	2886	5217
	PEG6000-2day	2321	3787	2840	3268	6108
	Mock-5day	567	760	691	636	1327
	NaCl-5day	1120	1845	1393	1572	2965
X190 vs Mix	Mock-2day	2361	3620	2324	3657	5981
	PEG6000-2day	1979	4005	3229	2755	5984
	Mock-5day	3184	4694	3953	3925	7878
	NaCl-5day	1748	4624	3576	2796	6372

**Table S2. Summary of the proportions of DEG between genotypes.**

Comparison	Condition	A-DEG	D-DEG	Up-regulated	Down-regulated	Total
EUP vs Mix	Mock-2day	0.120	0.185	0.136	0.169	0.305
	PEG6000-2day	0.155	0.206	0.168	0.192	0.360
	Mock-5day	0.038	0.041	0.041	0.038	0.079
	NaCl -5day	0.075	0.100	0.083	0.092	0.175
X190 vs Mix	Mock-2day	0.157	0.196	0.138	0.216	0.354
	PEG6000-2day	0.132	0.217	0.189	0.160	0.349
	Mock-5day	0.212	0.255	0.234	0.233	0.467
	NaCl -5day	0.116	0.251	0.207	0.160	0.367

**Table S3. Summary of the number of DEGs and four homoeologous expression modes in EUP vs Mix**

EUP vs Mix																	
Type		Mock (2d)				PEG6000 (2d)				Mock (5d)				NaCl (5d)			
		Mode 4	Mode 5	Mode 6	Mode 7	Mode 4	Mode 5	Mode 6	Mode 7	Mode 4	Mode 5	Mode 6	Mode 7	Mode 4	Mode 5	Mode 6	Mode 7
A↑	D↑	10	2	0	2	8	1	6	1	0	0	0	0	1	5	0	0
A=	D↑	128	0	0	33	100	0	0	45	14	0	0	5	41	0	0	14
A↓	D↑	5	0	0	2	0	0	0	2	0	0	0	0	5	0	0	2
A=	D↓	0	51	24	0	0	78	47	0	0	13	11	0	0	66	35	0
A↓	D↓	3	2	4	3	7	6	5	4	0	0	0	0	2	1	2	0
A↓	D=	64	0	0	39	81	0	0	62	25	0	0	15	82	0	0	46
A↑	D↓	0	0	1	0	0	1	1	0	0	0	0	0	0	1	0	0
A↑	D=	0	17	10	0	0	69	31	0	0	27	9	0	0	56	13	0
A=	D=	215	207	97	125	205	198	120	146	266	192	142	177	305	274	160	158

**Table S4. Summary of the number of DEGs and four homoeologous expression modes in X190 vs Mix**

X190 vs Mix																	
Type		Mock (2d)				PEG6000 (2d)				Mock (5d)				NaCl (5d)			
		Mode 4	Mode 5	Mode 6	Mode 7	Mode 4	Mode 5	Mode 6	Mode 7	Mode 4	Mode 5	Mode 6	Mode 7	Mode 4	Mode 5	Mode 6	Mode 7
A↑	D↑	3	0	2	3	9	1	3	5	26	17	7	8	5	1	1	3
A=	D↑	77	0	0	21	111	0	0	56	77	0	0	46	133	0	0	99
A↓	D↑	4	0	0	0	5	0	0	3	8	0	0	2	3	0	0	3
A=	D↓	0	49	22	0	0	81	44	0	0	35	34	0	0	127	108	0
A↓	D↓	12	6	6	8	3	9	1	2	21	8	6	11	0	3	3	2
A↓	D=	89	0	0	53	61	0	0	59	99	0	0	59	32	0	0	33
A↑	D↓	0	1	0	0	0	3	4	0	0	1	0	0	0	3	1	0
A↑	D=	0	35	12	0	0	67	37	0	0	78	32	0	0	38	26	0
A=	D=	250	206	100	110	192	194	146	191	182	159	67	95	185	190	150	156

A↑, the A homeolog was upregulated, A↓, the A homeolog was downregulated, A=, the A homeolog was unchanged, D↑, the D homeolog was upregulated, D↓, the D homeolog was downregulated, D=, the D homeolog was unchanged.