Table S1. The germination of the seven *E. crus-galli* populations treated by salinity stress for 48 hours.

NaCl concentration (mM)	**CH**			**QR**			**HS**			SM			HK			DC			QS		
0	67	73	69	71	66	62	72	68	78	76	67	71	59	76	76	75	65	69	66	77	68
20	47	45	42	49	53	46	52	49	44	53	47	51	56	48	52	54	47	60	56	49	62
50	26	31	23	34	24	28	25	34	31	34	28	27	37	34	23	34	29	36	35	41	29
150	11	9	13	9	15	7	13	15	15	15	11	16	16	11	18	17	11	18	18	12	10
200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table S2. The germination of the seven *E. crus-galli* populations treated by salinity stress for 72 hours.

NaCl concentration (mM)	**CH**			**QR**			**HS**			SM			HK			DC			QS		
0	87	85	86	87	88	89	89	78	84	82	90	88	79	84	88	78	94	87	91	89	86
20	68	75	71	67	72	73	76	67	77	78	83	67	74	78	79	76	77	80	86	67	74
50	51	35	46	40	53	41	38	47	54	45	53	46	46	57	43	47	58	50	65	42	38
150	17	20	16	17	20	13	15	18	21	17	20	15	21	19	17	19	22	17	23	39	28
200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table S3. The germination of the seven *E. crus-galli* populations treated by salinity stress for 96 hours.

NaCl concentration (mM)	CH				QR				HS				SM				HK				DC				QS	
0	89	98	97	100	89	94	89	95	97	96	89	94	97	89	98	96	98	92	90	95	100					
20	87	84	89	79	85	87	94	85	89	91	89	92	87	91	98	93	92	97	91	97	92					
50	45	53	57	48	51	53	64	52	48	64	57	50	61	55	60	61	54	63	52	65	60					
150	21	14	19	17	22	20	22	25	32	31	22	35	35	40	27	37	40	42	53	43	42					
200	4	2	0	0	0	0	6	5	5	8	11	7	5	9	10	12	10	9	8	4	10					

Table S4. The shoot length of seven *E. crus-galli* populations treated by salinity stress for 4 days.

NaCl concentration (mM)	Shoot length (cm)																									
	CH				QR				HS				SM				HK				DC				QS	
0	2.75	2.96	2.87	2.91	2.85	3.24	3.02	2.75	2.69	2.76	3.32	2.58	3.28	3.11	2.58	3.21	2.87	2.97	2.67	3.40	2.92					
20	2.25	2.46	2.37	2.07	2.70	2.85	2.35	3.01	2.48	2.74	2.51	2.97	2.67	2.58	3.01	2.87	3.01	2.54	3.42	3.55	2.68					
50	1.75	1.52	1.81	1.45	1.23	1.37	1.87	1.52	1.89	1.7	2.52	1.49	1.98	2.31	1.75	2.04	1.74	2.61	1.67	1.61	2.58					
150	0.63	0.47	0.51	0.25	0.20	0.19	0.64	0.5	0.78	0.75	0.61	0.73	0.74	0.79	0.68	0.78	0.65	0.81	0.32	0.37	0.45					
200	0	0	0	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00					

Table S5. The shoot length of seven *E. crus-galli* populations treated by salinity stress for 7 days.

NaCl concentration (mM)	Shoot length (cm)																				
	CH			**QR**			**HS**			SM			HK			DC			QS		
0	6.30	5.75	5.84	5.40	6.12	6.24	5.67	5.79	6.21	5.64	6.15	5.79	6.43	5.87	6.15	5.94	5.28	6.44	6.06	5.84	6.12
20	5.64	7.32	6.28	7.04	6.87	6.20	6.54	6.89	6.73	5.94	7.56	6.78	7.42	6.25	6.87	6.95	5.93	7.84	6.35	7.57	7.89
50	3.76	3.97	3.68	3.61	4.41	3.52	3.74	4.25	3.91	3.85	4.64	3.78	4.25	3.94	4.55	3.32	4.96	4.75	4.06	4.11	4.45
150	1.25	1.04	1.75	1.27	1.08	1.36	1.28	1.47	1.51	1.14	1.67	1.69	1.28	1.67	1.89	1.35	1.97	2.12	1.35	2.04	1.47
200	0.12	0.34	0.21	0.00	0.00	0.00	0.53	0.84	0.62	0.79	0.58	0.94	0.85	0.64	0.92	0.97	0.76	1.02	1.05	0.72	0.54

Table S6. The root length of seven *E. crus-galli* populations treated by salinity stress for 4 days.

NaCl concentration (mM)	Root length (cm)																				
	CH			**QR**			**HS**			SM			HK			DC			QS		
0	2.64	2.37	2.55	2.51	2.27	2.43	2.54	2.82	2.36	2.87	2.26	2.49	2.34	2.50	2.71	2.58	2.29	2.71	2.51	2.69	2.47
20	1.61	1.59	2.07	2.31	1.98	2.41	1.95	1.62	1.78	1.85	1.69	2.08	1.80	2.01	1.89	1.74	2.24	1.85	2.64	2.78	2.30
50	1.20	0.87	1.44	1.26	1.15	1.33	1.26	1.36	1.19	1.07	1.71	1.27	1.82	1.29	1.07	1.25	1.05	1.94	1.53	1.07	2.41
150	0.34	0.54	0.27	0.15	0.21	0.27	0.45	0.57	0.36	0.54	0.29	0.61	0.51	0.49	0.52	0.56	0.47	0.64	0.32	0.20	0.14
200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table S7. The root length of seven *E. crus-galli* populations treated by salinity stress for 7 days.

NaCl concentration (mM)	Root length (cm)																				
	CH			**QR**			**HS**			SM			HK			DC			QS		
0	5.13	4.57	4.69	4.46	5.01	4.89	5.20	4.39	4.57	4.36	5.24	4.51	5.02	4.87	4.64	5.14	4.39	4.87	4.56	5.24	4.57
20	5.02	5.31	5.48	4.64	5.26	4.51	5.39	5.44	5.17	5.58	4.99	5.67	5.51	4.97	5.93	5.94	5.28	5.47	5.64	4.38	5.27
50	2.75	2.92	3.38	2.15	2.74	2.48	3.24	3.07	3.29	2.65	3.74	3.52	3.04	3.75	3.41	3.56	3.08	3.92	2.68	3.01	3.41
150	1.26	1.57	1.09	1.23	0.87	1.01	1.22	1.46	1.45	1.28	1.56	1.42	1.57	1.19	1.67	1.55	1.33	1.89	1.54	1.32	1.24
200	0.17	0.39	0.21	0.00	0.00	0.00	0.29	0.41	0.22	0.42	0.30	0.27	0.22	0.48	0.42	0.41	0.35	0.52	0.74	0.32	0.47

Table S8. The fresh weight of seven *E. crus-galli* populations treated by salinity stress for 7 days.

NaCl concentration (mM)	Fresh weight (g)																				
	CH			**QR**			**HS**			SM			HK			DC			QS		
0	4.32	3.01	3.74	1.45	1.28	1.37	3.75	4.02	3.49	3.71	3.57	3.69	3.49	3.67	3.71	3.78	3.59	4.14	1.52	1.19	1.28
20	2.36	3.87	3.74	1.04	1.24	1.31	2.74	3.85	3.57	3.95	3.17	3.28	3.74	2.97	3.98	4.12	3.34	3.67	1.34	1.42	1.07
50	2.54	1.67	2.53	0.87	0.69	0.75	2.81	2.23	1.97	2.08	3.21	2.19	2.21	2.92	2.5	2.04	2.67	3.12	0.78	0.87	0.91
150	1.32	0.98	0.78	0.09	0.17	0.12	1.3	0.85	1.46	2.1	0.89	1.15	1.47	1.25	1.39	1.2	1.78	1.23	0.5	0.24	0.35
200	0.24	0.19	0.11	0	0	0	0.24	0.19	0.18	0.23	0.41	0.19	0.3	0.41	0.27	0.34	0.25	0.57	0.12	0.09	0.13

Table S9. The GST activity of *E. crus-galli* under 50mM NaCl treatment at different times.

Days	Fresh weight (g)																				
	CH			QR			HS			SM			HK			DC			QS		
0	127.1	135.0	140.8	139.0	149.5	163.5	157.4	165.2	165.2	177.6	167.5	176.3	195.4	184.2	195.0	256.1	267.7	224.0	269.2	291.9	294.0
1	156.5	163.2	165.3	166.8	160.4	171.8	172.6	175.8	207.8	195.5	212.2	198.3	211.3	211.3	225.4	281.9	281.1	285.8	331.4	336.4	332.9
3	248.9	241.8	215.8	240.5	248.8	260.2	253.7	264.8	262.4	291.0	270.3	295.0	304.3	318.0	299.2	344.0	347.7	311.1	375.3	360.1	388.4
5	184.6	172.4	170.8	174.4	197.4	195.0	184.5	204.9	207.5	221.2	203.7	215.6	225.4	280.2	229.5	257.0	284.2	318.4	331.1	338.0	319.9
7	109.0	130.4	147.5	134.3	128.1	136.6	158.8	143.5	137.6	167.9	156.3	169.6	182.7	202.7	197.1	218.1	223.4	221.6	319.9	281.6	307.7
14	143.6	129.7	131.0	132.0	157.8	131.1	131.1	142.3	141.5	178.0	169.9	164.3	181.2	192.7	190.8	196.9	207.6	235.2	264.1	275.7	294.6

Table S10. The GST activity of *E. crus-galli* without NaCl at different times.

Days	Fresh weight (g)																				
	CKCH			**CKQR**			**CKHS**			**CKSM**			**CKHK**			**CKDC**			**CKQS**		
0	132.4	131.3	140.5	139.1	145.1	152.8	167.8	167.8	162.6	186.8	195.2	207.3	226.2	230.6	239.8	250.1	246.4	281.7	303.8	287.0	285.7
1	142.1	127.0	124.7	121.1	142.6	136.7	167.4	140.8	178.6	224.5	232.9	181.4	227.6	223.3	209.1	229.9	273.3	239.9	282.0	290.5	274.3
3	109.8	113.3	131.1	127.6	151.2	128.7	171.1	170.3	182.5	195.8	213.6	202.7	230.1	250.5	233.3	262.0	263.5	224.8	280.3	307.7	274.4
5	145.8	107.8	121.7	125.9	143.7	155.7	170.8	185.0	174.0	184.2	207.3	194.3	227.6	239.1	228.0	277.3	251.7	264.0	282.5	289.6	268.9
7	139.8	132.6	121.8	127.0	140.0	146.3	177.6	152.4	162.6	185.7	180.0	195.6	227.0	208.1	225.5	246.8	214.1	251.8	274.4	258.9	274.1
14	134.6	130.9	142.8	132.2	152.0	147.0	161.4	169.9	154.7	191.5	193.8	188.8	235.3	210.3	202.9	227.4	285.2	218.7	283.1	291.3	240.6

Table S11. The Gene Ontology (GO) analysis of the DEGs between QR and QS *E. crus-galli* populations without NaCl. GO analysis was performed at level 2 for the three main categories.

Ontology	Term_name	Up_Count	Up_Percent	Down_Count	Down_Percent
cellular_component	extracellular region	33	10.12	21	9.68
cellular_component	cell	0	0	3	1.38
cellular_component	nucleoid	3	0.92	1	0.46
cellular_component	membrane	77	23.62	25	11.52
cellular_component	cell junction	9	2.76	10	4.61
cellular_component	membrane-enclosed lumen	5	1.53	7	3.23
cellular_component	macromolecular complex	37	11.35	4	1.84
cellular_component	organelle	131	40.18	62	28.57
cellular_component	extracellular region part	6	1.84	0	0
cellular_component	organelle part	82	25.15	30	13.82
cellular_component	membrane part	65	19.94	30	13.82
cellular_component	cell part	205	62.88	96	44.24
cellular_component	supramolecular complex	2	0.61	1	0.46
biological_process	cell killing	0	0	1	0.46
biological_process	immune system process	4	1.23	4	1.84
biological_process	metabolic process	134	41.1	82	37.79
biological_process	cell proliferation	1	0.31	0	0
biological_process	cellular process	164	50.31	81	37.33
biological_process	reproductive process	7	2.15	5	2.3
biological_process	multicellular organismal process	13	3.99	4	1.84
biological_process	developmental process	20	6.13	8	3.69
biological_process	growth	2	0.61	0	0
biological_process	rhythmic process	4	1.23	0	0

biological_process	response to stimulus	51	15.64	46	21.2
biological_process	localization	34	10.43	14	6.45
biological_process	multi-organism process	16	4.91	11	5.07
biological_process	biological regulation	51	15.64	33	15.21
biological_process	cellular component organization or biogenesis	48	14.72	9	4.15
biological_process	detoxification	2	0.61	0	0
molecular_function	catalytic activity	116	35.58	102	47
molecular_function	signal transducer activity	1	0.31	5	2.3
molecular_function	structural molecule activity	22	6.75	0	0
molecular_function	transporter activity	25	7.67	11	5.07
molecular_function	binding	125	38.34	101	46.54
molecular_function	antioxidant activity	6	1.84	3	1.38
molecular_function	nutrient reservoir activity	1	0.31	1	0.46
molecular_function	molecular transducer activity	0	0	1	0.46
molecular_function	molecular function regulator	4	1.23	6	2.76
molecular_function	molecular carrier activity	4	1.23	0	0
molecular_function	transcription regulator activity	13	3.99	5	2.3

Table S12. The Gene Ontology (GO) analysis of the DEGs between QR and QS *E. crus-galli* populations treated with 50 mM NaCl. GO analysis was performed at level 2 for the three main categories.

Ontology	Term_name	Up_Count	Up_Percent	Down_Count	Down_Percent
cellular_component	extracellular region	70	5.19	63	7.49
cellular_component	cell	3	0.22	2	0.24
cellular_component	nucleoid	2	0.15	1	0.12
cellular_component	membrane	177	13.11	238	28.3
cellular_component	cell junction	26	1.93	39	4.64
cellular_component	membrane-enclosed lumen	11	0.81	4	0.48
cellular_component	macromolecular complex	64	4.74	45	5.35
cellular_component	organelle	332	24.59	269	31.99
cellular_component	extracellular region part	5	0.37	9	1.07
cellular_component	organelle part	190	14.07	160	19.02
cellular_component	membrane part	181	13.41	241	28.66
cellular_component	cell part	593	43.93	479	56.96
cellular_component	supramolecular complex	1	0.07	13	1.55
biological_process	reproduction	1	0.07	0	0
biological_process	cell killing	3	0.22	0	0
biological_process	immune system process	9	0.67	15	1.78
biological_process	behavior	0	0	1	0.12
biological_process	metabolic process	525	38.89	347	41.26
biological_process	cell proliferation	1	0.07	0	0
biological_process	cellular process	467	34.59	359	42.69
biological_process	nitrogen utilization	0	0	1	0.12
biological_process	reproductive process	38	2.81	42	4.99
biological_process	signaling	1	0.07	1	0.12

biological_process	multicellular organismal process	45	3.33	48	5.71
biological_process	developmental process	68	5.04	81	9.63
biological_process	growth	5	0.37	21	2.5
biological_process	locomotion	0	0	3	0.36
biological_process	rhythmic process	3	0.22	6	0.71
biological_process	response to stimulus	255	18.89	170	20.21
biological_process	localization	69	5.11	83	9.87
biological_process	multi-organism process	49	3.63	37	4.4
biological_process	biological regulation	207	15.33	169	20.1
biological_process	cellular component organization or biogenesis	44	3.26	82	9.75
biological_process	detoxification	7	0.52	2	0.24
molecular_function	catalytic activity	534	39.56	369	43.88
molecular_function	signal transducer activity	5	0.37	18	2.14
molecular_function	structural molecule activity	14	1.04	3	0.36
molecular_function	transporter activity	65	4.81	62	7.37
molecular_function	binding	461	34.15	339	40.31
molecular_function	antioxidant activity	15	1.11	13	1.55
molecular_function	nutrient reservoir activity	10	0.74	2	0.24
molecular_function	molecular transducer activity	2	0.15	17	2.02
molecular_function	toxin activity	2	0.15	0	0
molecular_function	molecular function regulator	29	2.15	9	1.07
molecular_function	molecular carrier activity	3	0.22	0	0
molecular_function	transcription regulator activity	72	5.33	26	3.09
		4664	345.46	3889	462.46