

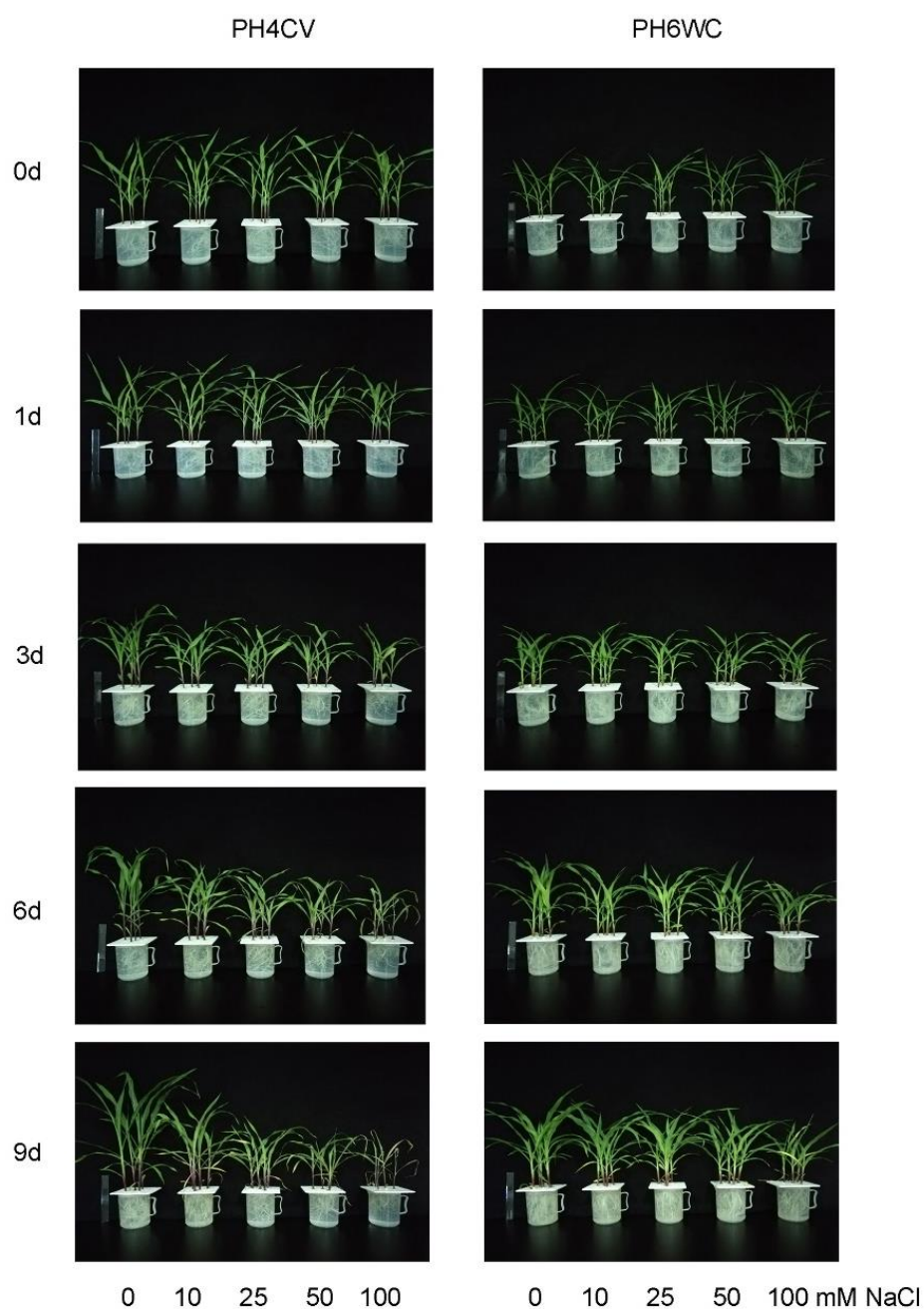


Fig. 1 Suppl. The growth difference of maize seedlings of two cultivars PH4CV and PH6WC under different NaCl concentrations and at different time points.

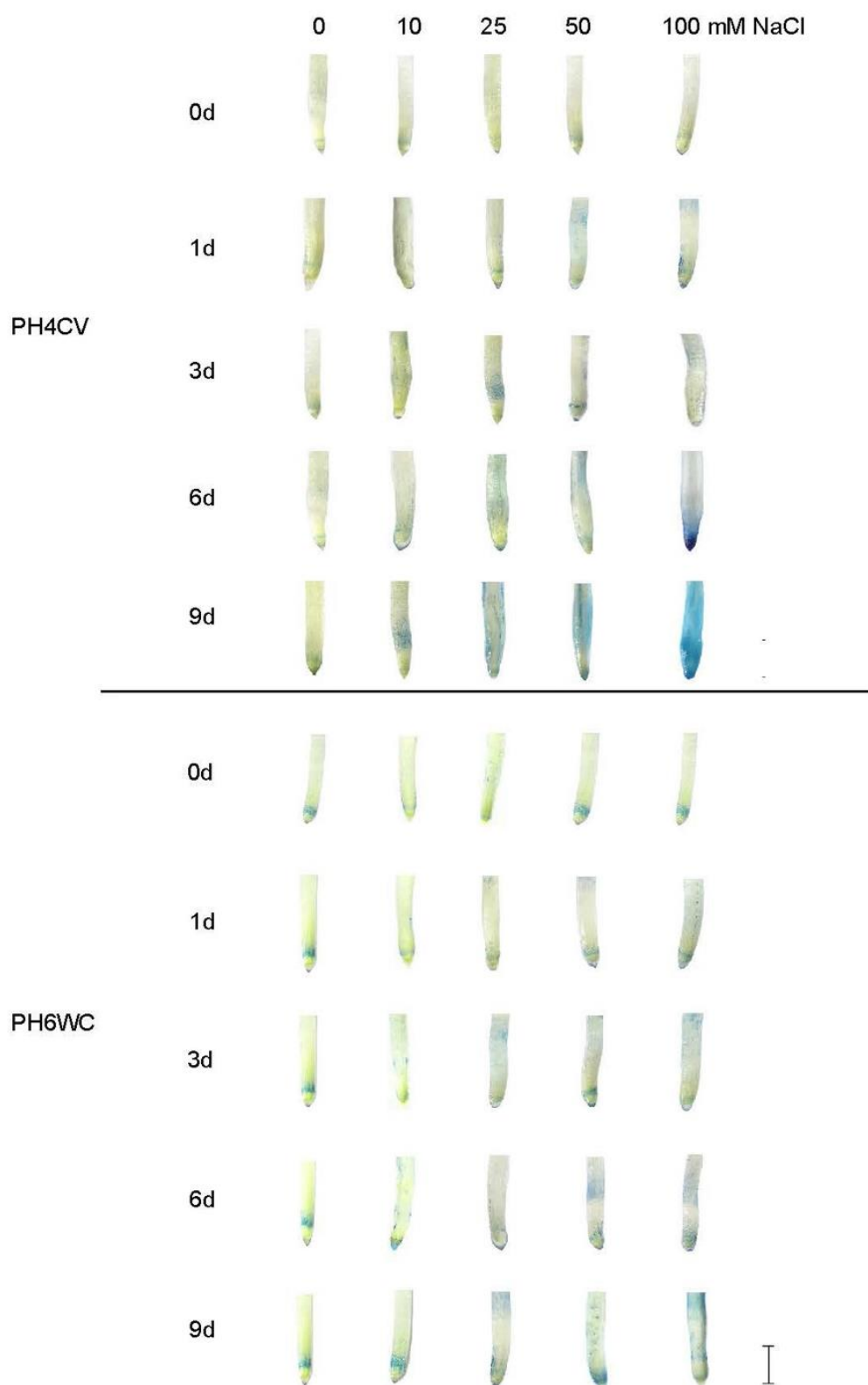


Fig. 2 Suppl. Roots of two maize cultivars PH4CV and PH6WC under different NaCl concentrations and at different time points stained with Evans blue (*bar* = 1 cm).

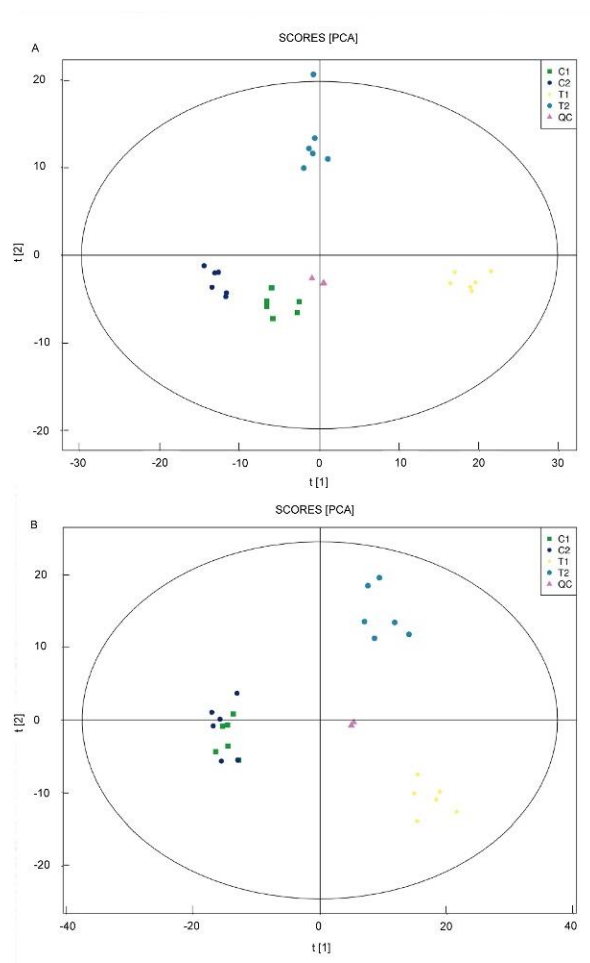


Fig. 3 Suppl. Principal component analysis (PCA) score diagrams in negative (A) and positive (B) ion modes of metabolic profiles in the roots of PH4CV and PH6WC maize cultivars in a control and under 100 mM NaCl stress (six biological replicates). C1 - PH4CV, C2 - PH6WC, T1 - 100 mM NaCl treated PH4CV, T2 - 100 mM NaCl treated PH6WC; QC - quality control sample, t[1] - the first principal component, t[2] - the second principal component.

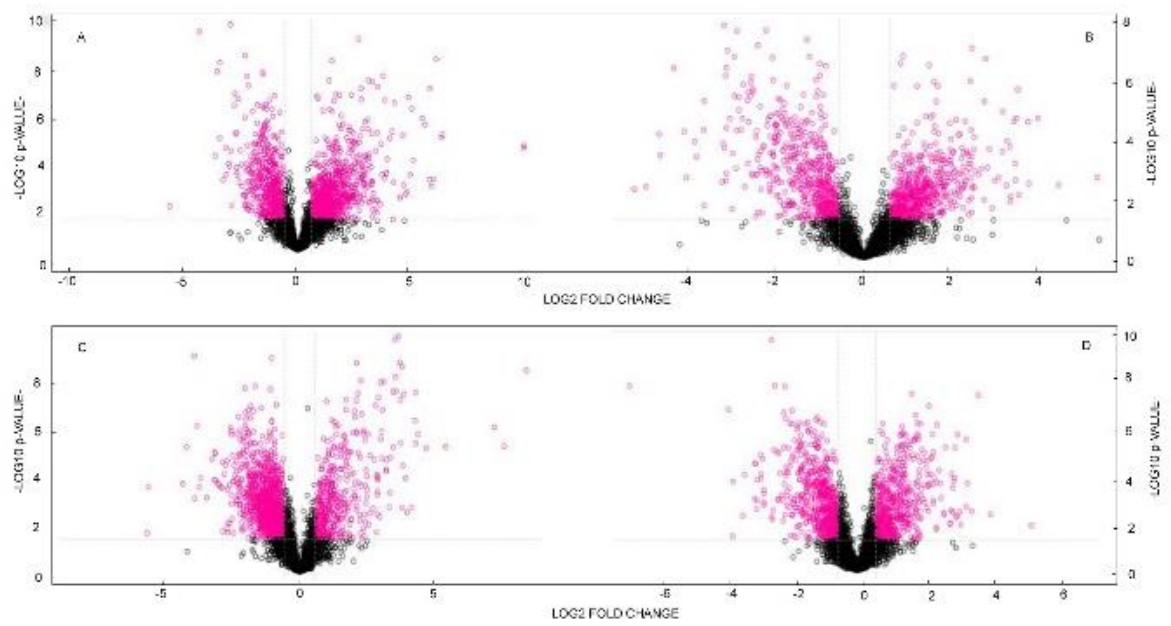


Fig. 4 Suppl. The Volcano plot of the negative ion mode (C1/T1, *A*) and (C2/T2, *C*), and the positive ion mode (C1/T1, *B*) and (C2/T2, *D*) in the roots of PH4CV and PH6WC maize cultivars under 100 mM NaCl stress. For abbreviations - see Fig. 3 Suppl.

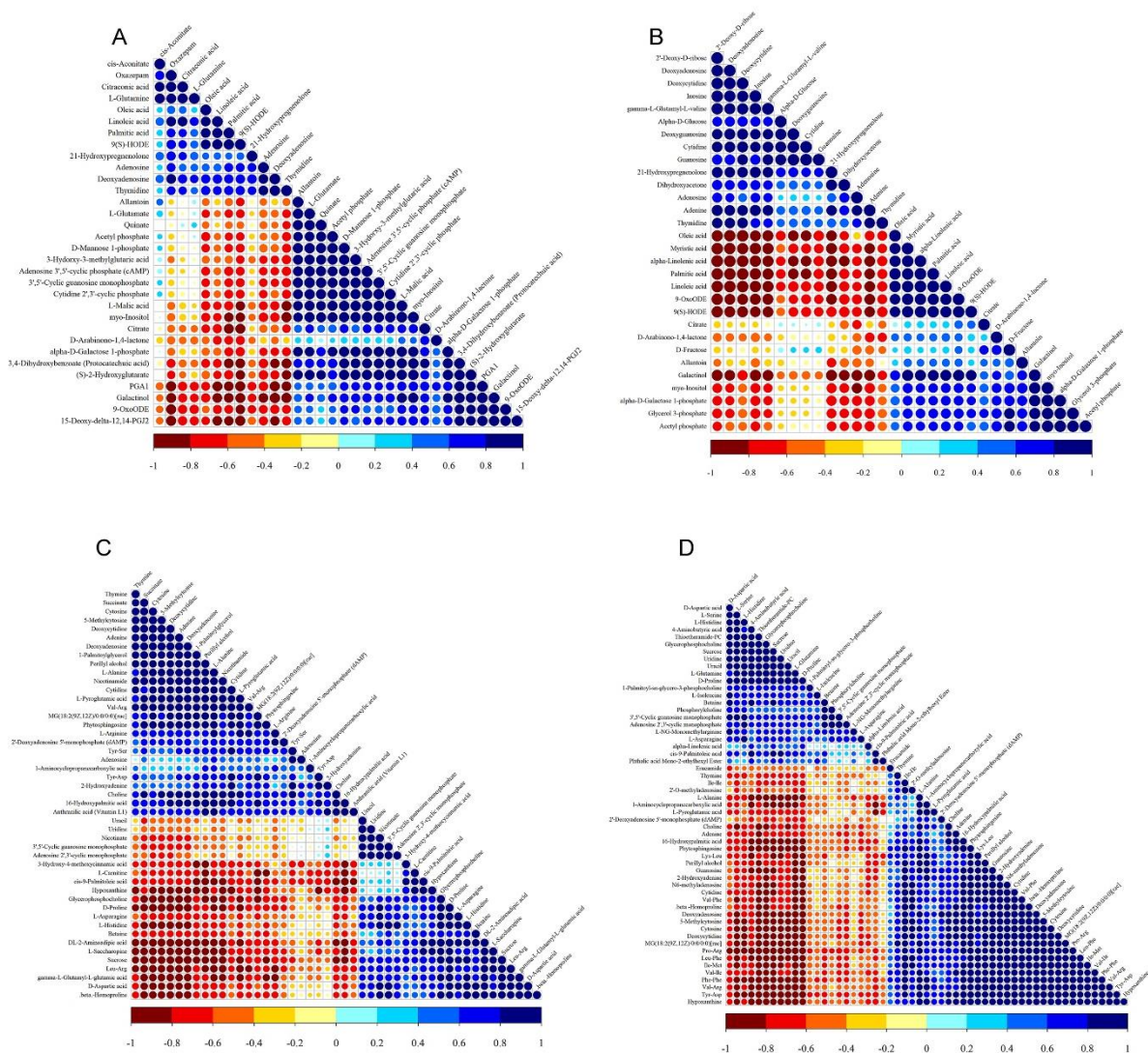


Fig. 5 Suppl. The comparison of metabolite-metabolite correlation with negative (*A,C*) and positive (*B,D*) ion modes in T1 and C1 or T2 and C2. For abbreviations - see Fig. 3 Suppl.

Table 1 Suppl. Changes in root metabolites in salt sensitive (PH4CV) and salt tolerant (PH6WC) maize cultivars under NaCl stress.

Metabolite category	Predicted metabolite	PH4CV(T1/C1)			PH6WC(T2/C2)		
		VIP	P-value	Log2FC	VIP	P-value	Log2FC
Organic acid	1-Aminocyclopropanecarboxylic acid	1.018	0.081	-0.414	1.149	0.000	-0.733
	16-Hydroxypalmitic acid	3.108	0.000	-1.504	3.208	0.000	-1.046
	.beta.-Homoproline	1.605	0.002	1.666	1.613	0.006	-1.730
	L-Pyroglutamic acid	4.634	0.000	-1.708	3.300	0.002	-0.820
Amino acid	D-Proline	1.634	0.002	2.014	2.692	0.000	2.645
	D-Aspartic acid	2.549	0.001	1.162	1.790	0.001	0.597
	L-Asparagine	2.480	0.007	0.935	3.480	0.046	0.922
	L-Histidine	3.634	0.010	2.461	3.738	0.002	1.903
Fatty acid	cis-9-Palmitoleic acid	7.023	0.001	1.109	4.801	0.002	0.720
	Palmitic acid	2.568	0.008	-1.363	7.127	0.003	3.068
	Linoleic acid	2.279	0.020	-1.533	9.293	0.006	3.557
	D-Arabinono-1,4-lactone	1.046	0.088	0.579	1.812	0.017	0.705
Alkaloid	Choline	2.489	0.000	-1.038	2.276	0.000	-0.631
	Betaine	1.555	0.006	0.773	1.388	0.004	0.492
Polyols and sugars	Glycerophosphocholine	1.597	0.001	2.893	4.610	0.002	5.531
	Perillyl alcohol	1.736	0.001	-2.377	1.819	0.001	-1.213
	Sucrose	4.195	0.000	7.298	2.148	0.000	4.866
	Galactinol	11.067	0.000	10.023	5.483	0.000	7.441
Mineral element	MG(18:2(9Z,12Z)/0:0/0:0)[rac]	2.619	0.003	-1.646	2.521	0.000	-0.830
	Uridine	1.816	0.048	0.606	4.177	0.000	1.370
	Deoxyadenosine	13.285	0.000	-2.117	14.381	0.000	-0.960
	Cytosine	1.597	0.000	-1.964	1.939	0.000	-1.008
others	Uracil	3.547	0.026	0.627	8.035	0.000	1.385
	Adenine	5.985	0.000	-1.945	4.917	0.005	-0.716
	Thymine	2.746	0.006	-2.053	2.866	0.031	-0.888
	Deoxycytidine	2.046	0.000	-3.725	2.871	0.000	-1.448
	Hypoxanthine	1.142	0.002	1.436	1.093	0.000	-2.294
	Thymidine	3.436	0.001	-1.662	5.058	0.011	-0.943
	Deoxyadenosine	1.138	0.000	-1.625	1.708	0.000	-1.142
	Allantoin	1.053	0.030	1.017	2.068	0.006	0.786