

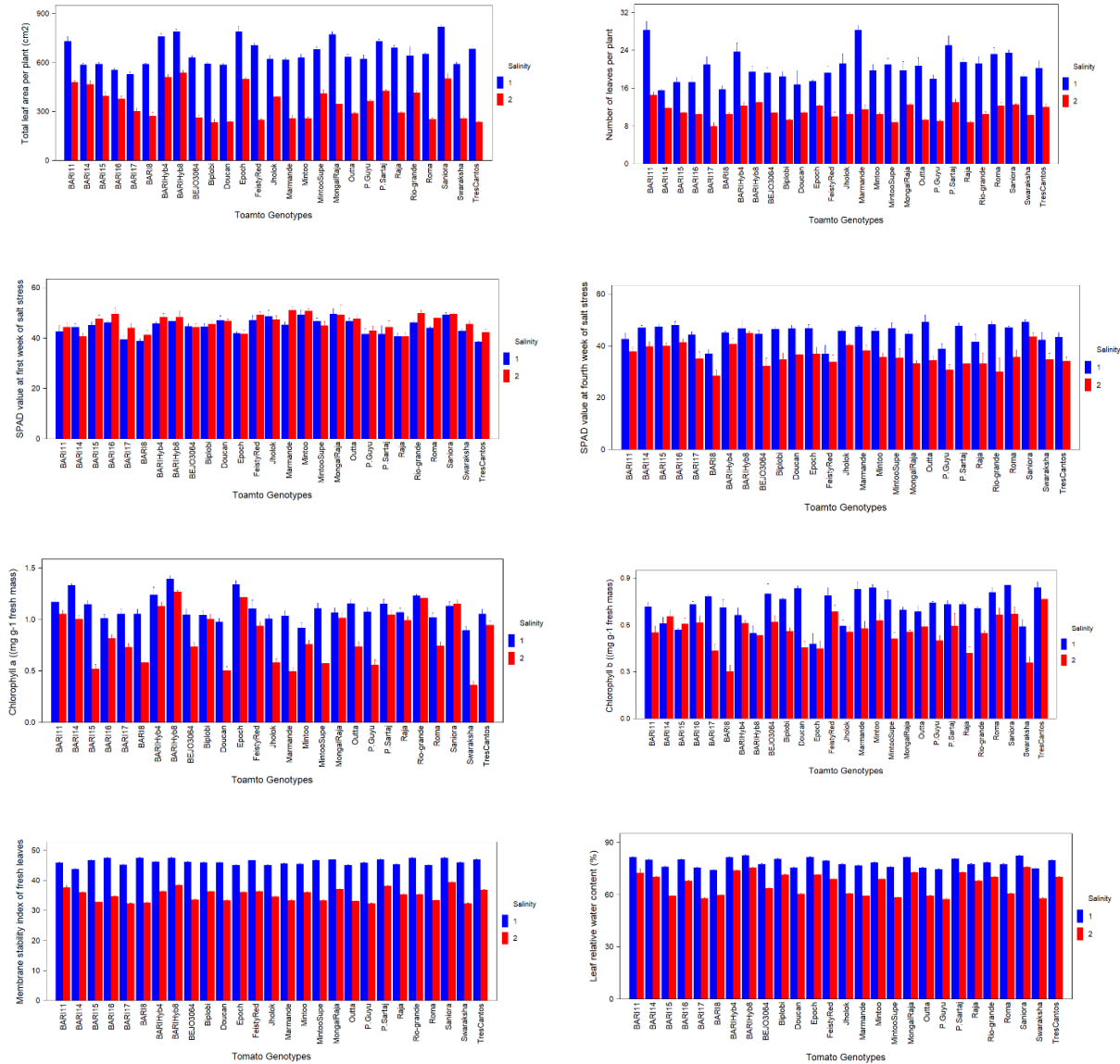
Table S1. Analysis of variance (ANOVA) (mean square) for physiomorphological traits in 27 tomato genotypes at the seedling stage under non-salinized control (S1) with 18.2 mM NaCl and salinized (S2) with 200mM NaCl conditions during 2018-2019

SOV	df	TLA	NLF	SPAD1	SPAD4	Chla	Chlb	LRWC	MSI	SHTLN	RTLN	RSLR	SDW	RDW	RTSDW	Na	K	Ca	KTNa
Replication	3	6115.94	7.25	138.78	34.55	0.28	0.025	40.56	12.86	92.01	3.26	0.002	4.78	0.001	0.0002	0.009	0.004	0.0290	0.09
Treatment (A)	1	4673605.30	4854.51	125.88	4372.20	3.77	1.426	8149.99	6584.69	43449.22	2827.51	0.048	9953.73	22.53	0.022	189.07	133.02	41.1393	1350.2
Genotypes (B)	26	49709.03	34.61	72.64	81.91	0.25	0.055	159.56	13.25	326.75	54.01	0.007	19.71	0.20	0.001	1.82	0.356	0.1749	6.69
AxB	26	10418.66	18.42	9.11	27.67	0.07	0.028	31.73	8.57	105.30	47.29	0.011	7.99	0.135	0.0007	1.52	0.34	0.0857	5.86
Error	159	1065.58	4.74	8.45	17.59	0.001	0.005	0.35	0.041	41.05	9.72	0.002	2.15	0.016	0.0002	0.011	0.004	0.0686	0.35
CV		6.34	13.89	6.41	10.34	4.53	11.97	0.82	0.50	8.88	13.23	16.33	11.61	16.64	20.99	7.71	5.13	16.17	21.37

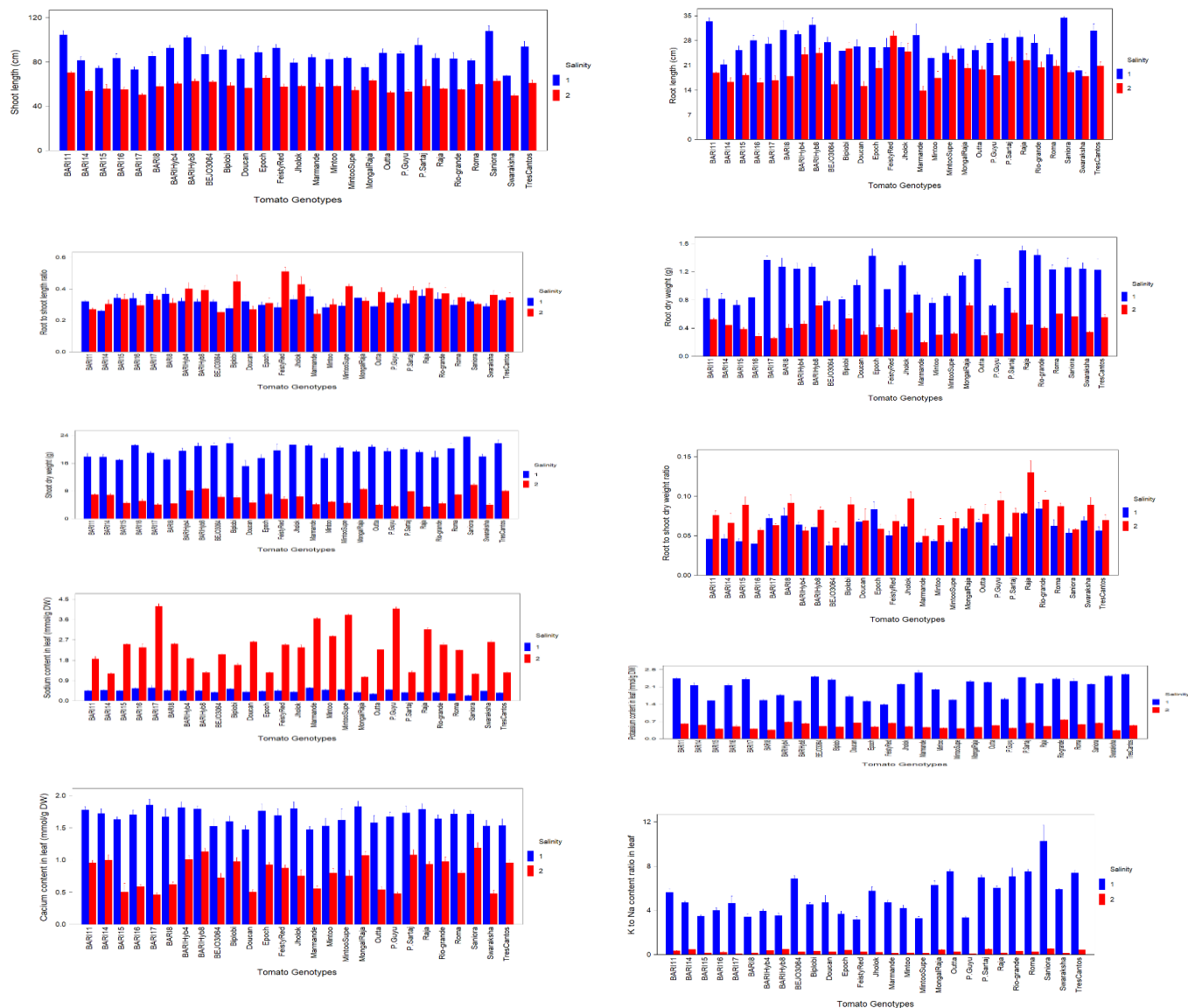
** and *** indicates significant at 1% and 0.1% level of probability respectively

TLA= Total Leaf Area per plant (cm²), **NLF**= Number of leaves per plant, **SPAD1**= SPAD value at first week of salt stress, **SPAD4**= SPAD value at fourth week of salt stress, **Chla**= Chlorophyll a concentration of fresh leaves(mg g⁻¹ fresh mass), **Chlb**= Chlorophyll b concentration of fresh leaves (mg g⁻¹ fresh mass), **LRWC** = Leaf relative water content(%), **MSI**= Membrane stability index of fresh leaves, **SHTLN**= Shoot length(cm), **RTLN**= Root length(cm), **RSLR**= Root to shoot length ratio , **SDW**=Shoot dry weight per plant(g), **RDW**=Root dry weight per plant (g), **RSDW** = Root to shoot dry weight ratio, **Na**= Sodium content in leaf (mmol/g DW), **K**= Potassium content in leaf (mmol/g DW), **Ca**= Calcium content in leaf (mmol/g DW), **KTNa**= Potassium to sodium content ratio in leaf

Supplementary Figure S1. Effect of salinity on 18 physio-morphological traits in 27 tomato genotypes at the seedling stage under non-salinized control (S1) with 18.2 mM NaCl and salinized (S2) with 200mM NaCl conditions during 2018-2019. Each bar represents four replicates mean value along with standard error.



Supplementary Figure S1 (continued). Effect of salinity on 18 physio-morphological traits in 27 tomato genotypes at the seedling stage under non-salinized control (S1) with 18.2 mM NaCl and salinized (S2) with 200mM NaCl conditions during 2018-2019. Each bar represents four replicates mean value along with standard error



Supplementary Figure S2. Visual salt damage score for severity of salt susceptibility by on a 1–5 scale (Dasgan et al. 2002) and percent reduction in total dry weight of 18 physio-morphological traits in 27 tomato genotypes at the seedling stage under 200mM NaCl conditions during 2018-2019. Each bar represents four replicates mean value along with standard error.

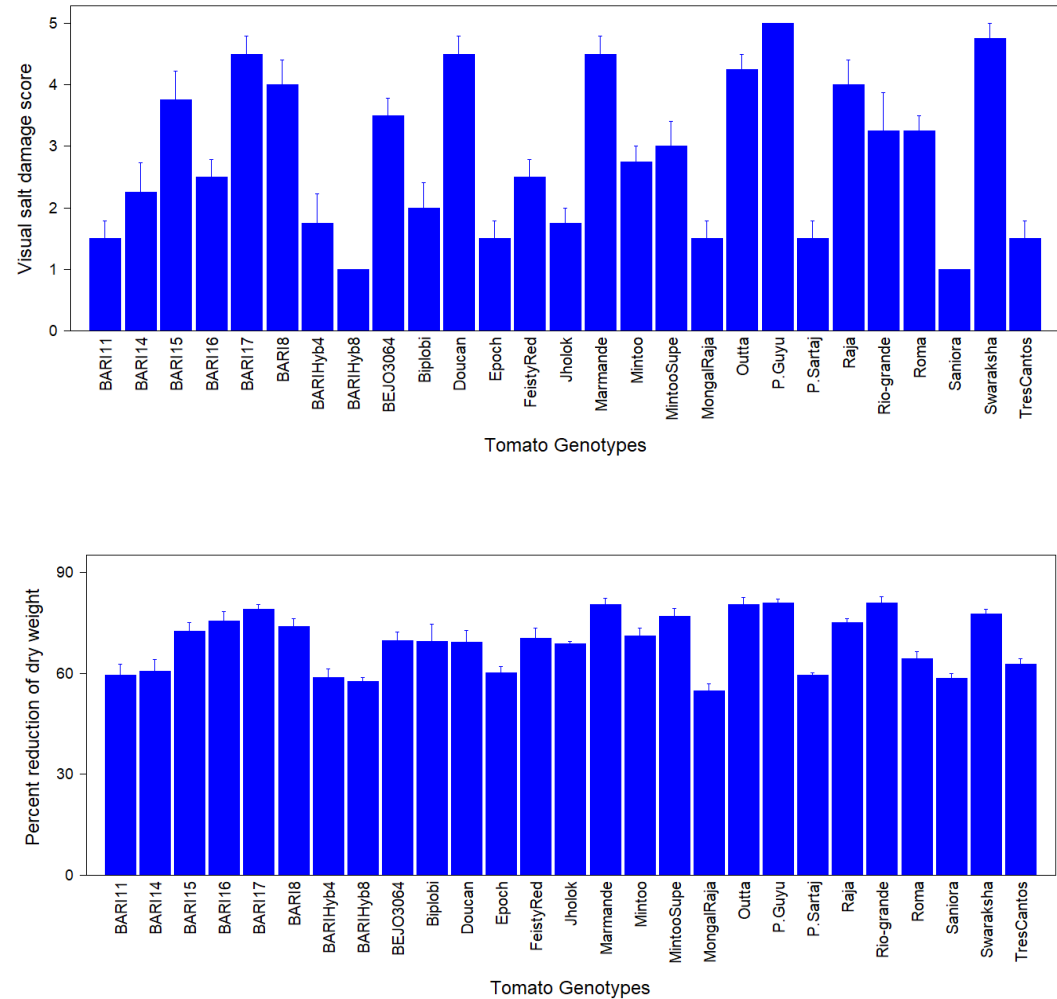


Table S2. Correlation co-efficient between 18 physio-morphological traits in 27 tomato genotypes at the seedling stage under non-salinized control (S1) with 18.2 mM NaCl and salinized (S2) with 200mM NaCl conditions during 2018-2019

	NLF	SPAD1	SPAD4	Chla	Chlb	LRWC	MSI	SHTLN	RTLN	RSR	SDW	RDW	RTSDW	Na	K	Ca	KTNa
TLA	0.86**	-0.12	0.75**	0.73**	0.62**	0.88**	0.91**	0.88**	0.76**	-0.21	0.89**	0.8**	-0.51**	-0.81**	0.81**	0.91**	0.81**
NLF		-0.16	0.76**	0.57**	0.67**	0.79**	0.88**	0.88**	0.72**	-0.29	0.9**	0.79**	-0.53**	-0.81**	0.9**	0.86**	0.87**
SPAD1			0.05	-0.14	0.01	-0.1	-0.19	-0.19	-0.2	0.01	-0.19	-0.26	-0.1	0.19	-0.24	-0.22	-0.19
SPAD4				0.54**	0.56**	0.73**	0.79**	0.72**	0.55**	-0.29*	0.81**	0.69**	-0.55**	-0.73**	0.78**	0.75**	0.77**
Chla					0.37**	0.87**	0.69**	0.64**	0.61**	-0.06	0.62**	0.61**	-0.3*	-0.73**	0.52**	0.76**	0.5**
Chlb						0.6**	0.68**	0.63**	0.56**	-0.14	0.69**	0.51**	-0.58**	-0.65**	0.67**	0.62**	0.65**
LRWC							0.9**	0.83**	0.72**	-0.2	0.85**	0.76**	-0.49**	-0.89**	0.77**	0.92**	0.74**
MSI								0.9**	0.77**	-0.24	0.97**	0.86**	-0.54**	-0.9**	0.91**	0.97**	0.87**
SHTLN									0.81**	-0.33*	0.92**	0.78**	-0.55**	-0.81**	0.83**	0.88**	0.84**
RTLN										0.29*	0.76**	0.72**	-0.27	-0.67**	0.69**	0.78**	0.7**
RSR											-0.29*	-0.14	0.46**	0.25	-0.25	-0.19	-0.27
SDW												0.86**	-0.59**	-0.88**	0.93**	0.95**	0.91**
RDW													-0.18	-0.81**	0.82**	0.88**	0.84**
RTSDW														0.49**	-0.52**	-0.47**	-0.45**
Na															-0.8**	-0.9**	-0.78**
K																0.88**	0.94**
Ca																	0.84**

df = 54-2 = 52; r0.05 = 0.273, r0.01 = 0.354, ** Significant at 1% level, * Significant at 5% level.

Where, TLA= Total Leaf Area per plant (cm²), NLF= Number of leaves per plant, SPAD1= SPAD value at first week of salt stress, SPAD4= SPAD value at fourth week of salt stress, Chla= Chlorophyll a concentration of fresh leaves(mg g⁻¹ fresh mass), Chlb= Chlorophyll b concentration of fresh leaves (mg g⁻¹ fresh mass), LRWC = Leaf relative water content(%), MSI= Membrane stability index of fresh leaves, SHTLN= Shoot length(cm), RTLN= Root length(cm), RSLR= Root to shoot length ratio, SDW=Shoot dry weight per plant (g), RDW=Root dry weight per plant (g.), RSDW = Root to shoot dry weight ratio, Na= Sodium content in leaf (mmol/g DW), K= Potassium content in leaf (mmol/g DW), Ca= Calcium content in leaf (mmol/g DW), KTNa= Potassium to sodium content ratio in leaf

Table S3. Principal component (PC) loadings of physio-morphological traits among in 27 tomato genotypes at the seedling stage under non-salinized control (S1) with 18.2 mM NaCl and salinized (S2) with 200mM NaCl conditions during 2018-2019

Traits	PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC9	PC10
Std deviation	3.556	1.264	0.865	0.792	0.622	0.576	0.439	0.391	0.318	0.270
Proportion of variation	0.744	0.094	0.044	0.037	0.023	0.020	0.011	0.009	0.006	0.004
Cumulative proportion	0.744	0.838	0.882	0.919	0.941	0.961	0.972	0.981	0.987	0.992
TLA	-0.256	-0.049	0.002	-0.138	0.084	-0.086	0.654	0.608	0.261	-0.122
NLF	-0.265	0.085	-0.052	0.173	-0.015	0.098	0.195	0.150	-0.655	0.555
SPAD4	-0.229	0.146	0.048	0.174	0.274	-0.847	0.088	-0.280	-0.025	-0.016
Chla	-0.210	-0.199	-0.123	-0.729	-0.083	-0.114	-0.069	-0.166	-0.259	-0.251
Chlb	-0.200	0.084	0.585	0.025	-0.756	-0.082	0.116	-0.122	0.046	-0.017
LRWC	-0.260	-0.067	-0.087	-0.380	-0.008	-0.061	-0.056	-0.046	-0.024	0.338
MSI	-0.276	-0.010	-0.027	0.039	0.047	0.062	-0.128	0.112	0.188	-0.121
SHTLN	-0.264	0.061	-0.052	0.074	0.139	0.342	0.345	-0.469	0.012	-0.160
RTLN	-0.222	-0.400	0.225	0.131	0.255	0.255	0.219	-0.344	-0.019	-0.085
RSLR	0.061	-0.700	0.421	0.087	0.181	-0.127	-0.186	0.184	-0.050	0.106
SDW	-0.277	0.040	-0.013	0.095	0.029	0.046	-0.185	-0.013	0.239	0.174
RDW	-0.253	-0.192	-0.293	0.225	-0.183	-0.034	-0.110	-0.065	0.240	0.180
RSDW	0.160	-0.459	-0.532	0.222	-0.425	-0.174	0.235	-0.078	-0.097	-0.112
Na	0.273	-0.018	0.130	-0.112	0.050	-0.034	0.186	-0.004	-0.226	0.009
K	-0.267	0.044	0.007	0.215	-0.005	0.031	-0.238	0.261	-0.434	-0.517
Ca	-0.270	-0.109	-0.090	-0.138	-0.040	0.063	-0.221	0.088	0.157	0.196
KTNa	-0.275	0.029	-0.069	0.162	-0.033	0.031	-0.212	0.121	-0.075	-0.242

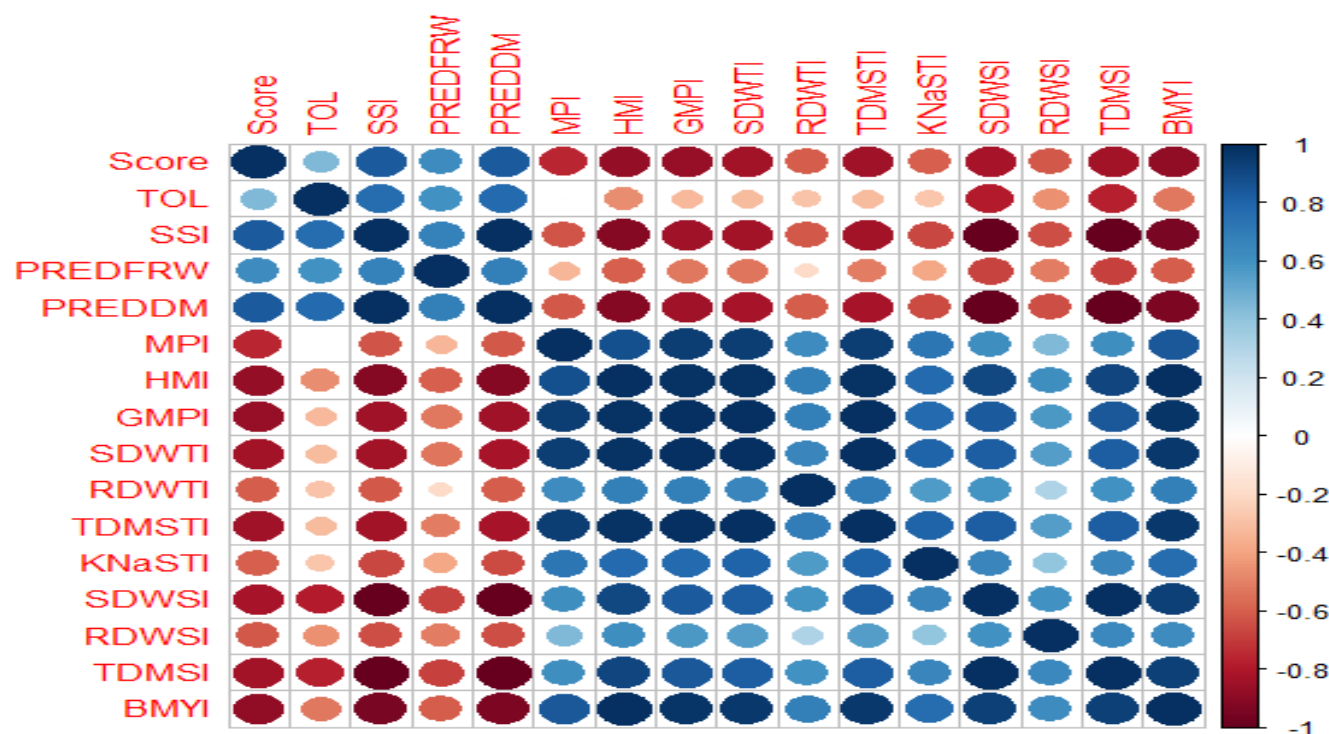
TLA= Total Leaf Area per plant (cm²), **NLF**= Number of leaves per plant, **SPAD1**= SPAD value at first week of salt stress, **SPAD4**= SPAD value at fourth week of salt stress, **Chla**= Chlorophyll a concentration of fresh leaves(mg g⁻¹ fresh mass), **Chlb**= Chlorophyll b concentration of fresh leaves (mg g⁻¹ fresh mass), **LRWC** = Leaf relative water content(%), **MSI**= Membrane stability index of fresh leaves, **SHTLN**= Shoot length(cm), **RTLN**= Root length(cm), **RSLR**= Root to shoot length ratio , **SDW**=Shoot dry weight per plant(g), **RDW**=Root dry weight per plant (g), **RSDW** = Root to shoot dry weight ratio, **Na**= Sodium content in leaf (mmol/g DW), **K**= Potassium content in leaf (mmol/g DW), **Ca**= Calcium content in leaf (mmol/g DW), **KTNa**= Potassium to sodium content ratio in leaf

Table S4. Analysis of variance (ANOVA) (mean square) for salt tolerance indices related traits in 27 tomato genotypes at the seedling stage under non-salinized control (S1) with 18.2 mM NaCl and salinized (S2) with 200mM NaCl conditions during 2018-2019

SOV	df	Score	TOL	SSI	PREDFRW	PREDDM	MPI	HMI	GMPI	SDWSTI	RDWSTI	TDMSTI	K Na STI	SDWSI	RDWSI	TDMSI	BMVI
Replication	3	2.0586	9.0343	0.0105	49.3704	50.4468	2.3407	2.4826	2.0368	0.0051	0.0022	0.0049	0.0001	0.0048	0.0334	0.0050	0.0421
Genotypes	26	6.5064	16.9974	0.0589	265.5449	282.8682	10.6768	21.9869	16.4680	0.0507	0.1272	0.0513	0.0070	0.0282	0.0818	0.0283	0.3735
Error	78	0.3792	3.6020	0.0043	45.3626	20.6336	1.2793	1.0953	1.0586	0.0031	0.0100	0.0030	0.0001	0.0022	0.0114	0.0021	0.0168
CV		21.52	13.34	6.56	11.17	6.56	8.43	11.03	9.15	18.18	24.40	17.44	20.29	15.49	25.10	14.76	12.98

** and *** indicate significant at 1% and 0.1% level of probability respectively

Here, Score = Visual salt damage score, **TOL** = Tolerance Index, **SSI** = Stress susceptibility index, **PREDFRW** = Percent reduction of fresh weight, **PREDDM** = Percent reduction of dry weight, **MPI** = Mean productivity index, **HMI** = Harmonic mean index, **GMPI** = Geometric mean productivity index, **SDWSTI** = Shoot dry weight stress tolerance index, **RDWSTI** = Root dry weight stress tolerance index, **TDMSTI** = Total dry matter stress tolerance index, **KNaSTI** = Potassium to sodium ion ratio tolerance index, **SDWSI** = Shoot dry weight stress index, **RDWSI** = Root dry weight stress index, **TDMSI** = Total dry matter stress index, **BMVI** = Biomass yield index

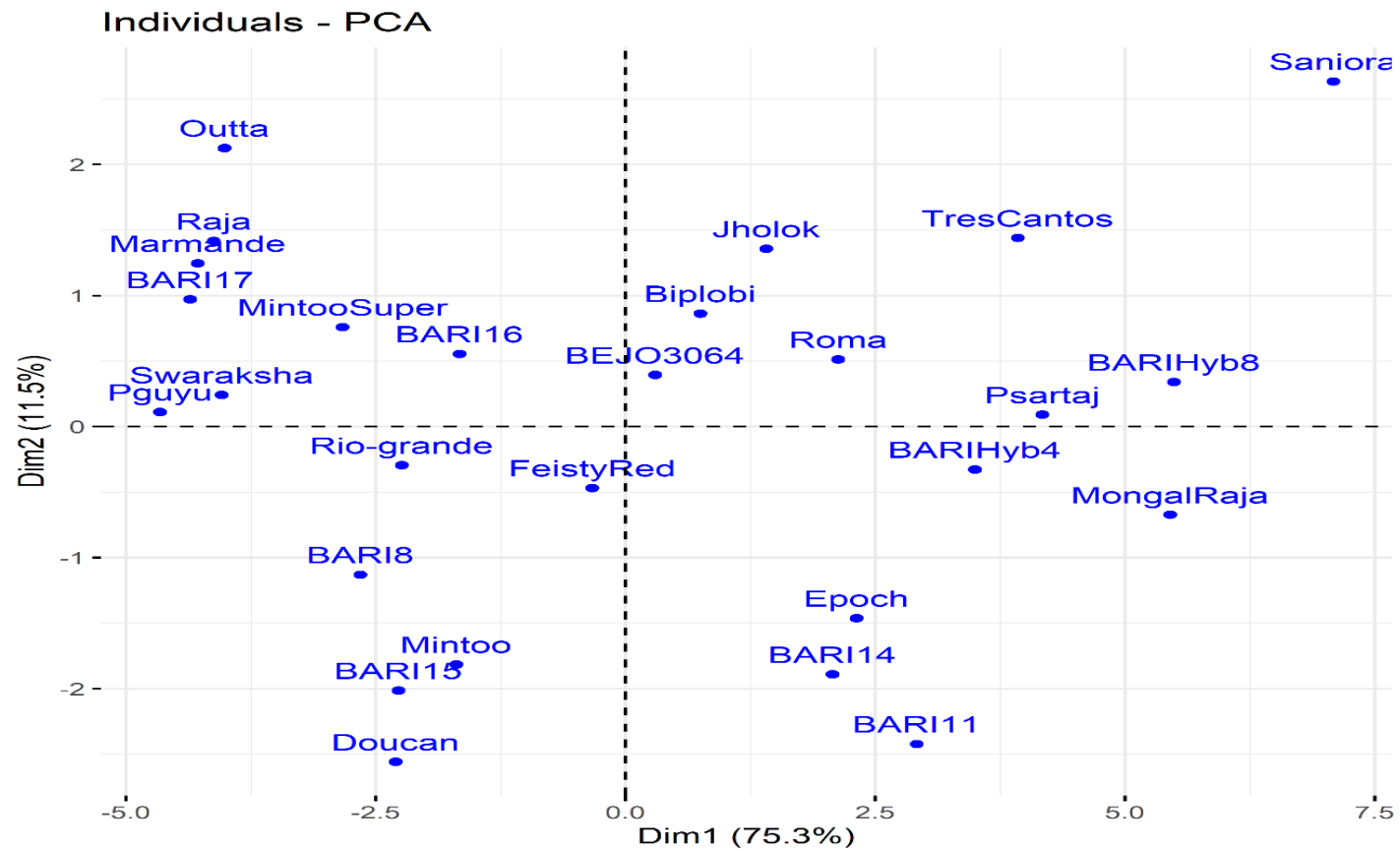


Supplementary Figure S3. Correlation co-efficient between salt tolerance indices related traits in 27 tomato genotypes at the seedling stage under non-salinized control (S1) with 18.2 mM NaCl and salinized (S2) with 200mM NaCl conditions during 2018-2019. Where, Score = Visual salt damage score, TOL = Stress tolerance, SSI = Stress susceptibility index, PREDFRW = Percent reduction of fresh weight, PREDDM = Percent reduction of dry weight, MPI = Mean productivity index, HMI = Harmonic mean index, GMPI = Geometric mean productivity index, SDWSTI = Shoot dry weight stress tolerance index, RDWSTI = Root dry weight stress tolerance index, TDMSTI = Total dry matter stress tolerance index, KNaSTI = Potassium to sodium ion ratio tolerance index, SDWSI = Shoot dry weight stress index, RDWSI = Root dry weight stress index, TDMSI = Total dry matter stress intensity, BMYI = Biomass yield index. Pearson correlation matrix of the studied tolerance indices attributes under salinity (200mM NaCl) relative to control conditions (n =4). Large circles represent strong correlations and smaller circles represent weaker correlations. The color scale indicates the extent of correlation, where 1 denotes completely positive correlation (dark blue) and -1 denotes completely negative correlation (dark red) between two traits. Only significant correlations are shown (P=0.05).

Table S5. Principal component (PC) loadings for salt tolerance indices related traits in 27 tomato genotypes at the seedling stage under non-salinized control (S1) with 18.2 mM NaCl and salinized (S2) with 200mM NaCl conditions during 2018-2019

Traits	PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC9	PC10
Std deviation	3.480	1.326	0.922	0.685	0.590	0.558	0.354	0.161	0.041	0.017
Proportion of variation	0.757	0.110	0.053	0.029	0.022	0.019	0.008	0.002	0.000	0.000
Cumulative proportion	0.757	0.867	0.920	0.949	0.971	0.990	0.998	1.000	1.000	1.000
Score	-0.263	-0.077	-0.070	-0.027	0.134	0.398	-0.838	0.194	-0.046	0.013
TOL	-0.167	0.586	0.241	0.011	0.127	-0.103	-0.058	-0.163	-0.577	-0.182
SSI	-0.277	0.160	0.103	-0.015	0.139	-0.091	-0.078	-0.440	0.289	0.347
PREDFRW	-0.191	0.315	-0.418	-0.399	-0.467	0.501	0.212	-0.126	0.019	-0.010
PREDDM	-0.276	0.171	0.100	-0.013	0.144	-0.093	-0.069	-0.451	0.222	-0.083
MPI	0.225	0.452	0.147	0.044	-0.066	0.020	-0.025	0.392	-0.176	0.377
HMI	0.284	0.088	0.048	0.036	-0.089	0.050	-0.146	-0.205	0.215	0.290
GMPI	0.274	0.215	0.082	0.040	-0.085	0.041	-0.111	-0.004	0.144	0.276
SDWTI	0.272	0.205	0.138	0.088	-0.094	0.096	-0.123	-0.031	0.286	-0.560
RDWTI	0.190	0.174	-0.636	-0.321	0.144	-0.576	-0.259	0.021	0.008	-0.045
TDMSTI	0.274	0.211	0.084	0.051	-0.073	0.042	-0.132	-0.019	0.258	-0.385
KNaSTI	0.227	0.122	-0.295	0.121	0.754	0.441	0.256	-0.051	0.014	0.007
SDWSI	0.273	-0.205	-0.077	0.089	-0.124	0.088	-0.120	-0.404	-0.387	-0.004
RDWSI	0.195	-0.147	0.430	-0.835	0.225	0.065	0.011	0.003	-0.016	-0.012
TDMSI	0.275	-0.204	-0.052	0.014	-0.099	0.077	-0.109	-0.370	-0.354	-0.027
BMYI	0.286	0.033	0.026	0.034	-0.095	0.056	-0.113	-0.150	0.101	0.270

Where, Score = Visual salt damage score, **TOL** = Stress tolerance, **SSI** = Stress susceptibility index, **PREDFRW** = Percent reduction of fresh weight, **PREDDM** = Percent reduction of dry weight, **MPI** = Mean productivity index, **HMI** = Harmonic mean index, **GMPI** = Geometric mean productivity index, **SDWSTI** = Shoot dry weight stress tolerance index, **RDWSTI** = Root dry weight stress tolerance index, **TDMSTI** = Total dry matter stress tolerance index, **KNaSTI** =Potassium to sodium ion ration tolerance index, **SDWSI**=Shoot dry weight stress index, **RDWSI** = Root dry weight stress index, **TDMSI** = Total dry matter stress intensity, **BMYI** = Biomass yield index



Supplementary Fig S4 Individuals PCA plot for salt tolerance indices related traits in 27 tomato genotypes at the seedling stage under non-salinized control (S1) with 18.2 mM NaCl and salinized (S2) with 200mM NaCl conditions during 2018-2019.

Genotypes	Dim.1	Dim.2	Dim.3	Dim.4	Dim.5	Ranking genotypes for salt tolerance
BARI8	-2.65603	-1.13057	0.583232	-0.12235	-0.4618	20
BARI11	2.914482	-2.42157	-0.94988	0.274178	0.071703	7
BARI14	2.068687	-1.89104	-0.1596	-0.02278	0.723592	10
BARI15	-2.276	-2.01439	-0.74672	0.705128	0.414541	18
BARI16	-1.66218	0.554677	-1.56761	-0.90151	-0.79942	15
BARI17	-4.35891	0.969832	0.969342	-0.07562	0.064116	26
BARIHyb4	3.499709	-0.32758	0.791918	-0.44057	-0.66152	6
BARIHyb8	5.490627	0.339592	0.316713	0.645629	-1.18183	2
Epoch	2.309893	-1.46196	1.183964	-0.85919	-0.91652	8
Biplobi	0.748964	0.861659	-1.40877	1.413949	0.12546	12
MongalRaja	5.449915	-0.67284	0.735926	0.799578	0.284098	3
Mintoo	-1.69375	-1.81525	-0.66997	-0.43364	-0.32137	16
MintooSuper	-2.83282	0.759478	-0.65879	0.310865	-0.37705	21
Jholok	1.405152	1.357689	0.178695	0.939574	-1.10785	11
Swaraksha	-4.04517	0.242377	1.190802	0.390269	0.513497	23
Rio-grande	-2.24224	-0.29393	0.754974	-0.82353	0.231583	17
Raja	-4.12595	1.416752	1.056769	0.970282	-0.3922	24
P.Sartaj	4.171478	0.090538	0.028986	0.775378	1.263867	4
P.Guyu	-4.66299	0.112036	-0.91847	0.542907	0.466979	27
Roma	2.127493	0.513264	0.65581	0.535279	0.099394	9
TresCantos	3.925255	1.439323	0.122384	-0.28962	0.148807	5
Marmande	-4.28464	1.245559	-0.60445	-0.85173	-0.04375	25
FeistyRed	-0.33389	-0.46927	-0.93423	-0.67821	-0.87767	14
BEJO3064	0.297227	0.394294	-1.31937	-0.29007	0.473129	13
Outta	-4.01631	2.125059	0.620984	-0.24853	0.591441	22
Doucan	-2.30122	-2.55831	1.023389	-0.68004	0.723863	19
Saniora	7.083223	2.634586	-0.27602	-1.58563	0.944909	1

Table S6. Individual coordinates-PC scores for salt tolerance indices related traits in 27 tomato genotypes at the seedling stage under non-salinized control (S1) with 18.2 mM NaCl and salinized (S2) with 200mM NaCl conditions during 2018-2019

