

## Supplementary Tables

**Table S1:**Bulb yield and yield related observations of 36 onion accessions under control and salinity stress condition

Cultivar name*	Control					Salinity (ECiw7 dSm <sup>-1</sup> )				
	Plant height cm)	Number of leaves/plant	Bulb diameter (cm)	Bulb yield/plant (g)	Total soluble solids	Plant height cm)	Number of leaves/plant	Bulb diameter (cm)	Bulb yield/plant (g)	Total soluble solids
Pusa Red	43.17±1.25	8.45±0.03	5.64±0.09	52.29±0.45	13.90±0.06	41.18±0.28	8.10±0.06	5.21±0.05	36.83±0.07	13.20±0.12
Kalyanpur Red Round (KKR)	42.25±0.42	7.90±0.05	5.06±0.02	40.00±0.14	15.77±0.06	37.46±0.32	7.84±0.09	4.21±0.05	22.60±0.35	14.85±0.04
ALR	44.88±0.68	8.76±0.06	4.70±0.06	41.53±0.06	12.90±0.06	41.45±0.40	8.56±0.12	4.17±0.07	23.89±0.06	12.20±0.12
B-780 (Baswant780)	38.95±0.13	8.39±0.27	5.75±0.03	71.05±0.03	11.83±0.04	35.37±0.25	8.02±0.05	4.75±0.03	46.40±0.23	10.67±0.06
Agrifound White	40.66±0.36	8.25±0.03	5.10±0.03	50.22±0.13	13.60±0.17	35.49±0.61	8.10±0.05	4.86±0.03	28.18±0.10	11.97±0.02
Punjab Naroya	41.48±0.20	7.30±0.12	5.23±0.07	48.42±0.45	13.63±0.06	38.73±0.19	7.08±0.05	4.75±0.03	32.78±0.13	13.90±0.06
GJWO-1	43.82±0.25	8.17±0.14	5.31±0.02	58.70±0.17	12.37±0.06	42.62±0.47	7.96±0.03	4.94±0.03	49.10±0.06	10.37±0.04
RO 59 (Arpita)	44.85±0.41	7.78±0.13	5.76±0.02	46.42±0.24	11.87±0.02	42.73±0.53	7.60±0.13	5.36±0.02	32.50±0.29	10.60±0.12
Arka Pitamber	47.33±0.32	9.10±0.04	4.90±0.05	36.89±0.06	15.67±0.06	43.88±0.42	8.76±0.08	4.15±0.03	26.00±0.14	15.27±0.16
NHRDF Red (L-28)	43.95±0.37	9.01±0.06	5.80±0.05	77.00±0.12	12.07±0.04	43.48±0.42	8.98±0.05	5.44±0.06	65.35±0.20	10.67±0.08
Bhima Super	42.84±0.47	8.44±0.03	5.22±0.05	56.28±0.16	12.30±0.17	38.60±0.53	7.89±0.08	4.84±0.03	36.44±0.25	12.07±0.01
Bhima Raj	39.89±0.24	8.32±0.05	5.29±0.06	66.31±0.18	12.80±0.12	38.83±0.23	8.25±0.08	4.78±0.03	43.37±0.21	11.63±0.06
Bhima Red	38.87±0.39	7.90±0.09	5.21±0.05	51.15±0.09	12.43±0.06	36.52±0.43	7.66±0.12	4.73±0.02	40.82±0.06	12.00±0.12
BhimaShweta	33.44±0.65	8.30±0.06	5.33±0.05	53.84±0.06	11.87±0.08	32.50±0.17	8.05±0.03	5.09±0.05	40.53±0.12	11.70±0.17
Bhima Shakti	32.33±0.16	8.70±0.14	5.44±0.05	55.17±0.10	12.70±0.06	30.45±0.51	8.33±0.10	4.99±0.08	35.88±0.07	12.07±0.04
POS38	38.75±0.18	9.06±0.06	5.28±0.08	69.67±0.06	12.10±0.06	37.65±0.45	8.91±0.05	4.87±0.04	55.90±0.06	11.50±0.12
Arka Bheem	45.40±0.40	8.21±0.33	5.19±0.03	54.84±0.09	14.37±0.12	41.82±0.16	7.24±0.14	4.72±0.05	33.11±0.06	11.80±0.12
RO-252	43.93±0.53	8.35±0.09	5.91±0.03	56.75±0.14	12.37±0.14	41.57±0.14	8.20±0.07	5.31±0.10	35.69±0.06	11.83±0.04
Bhima Dark Red	45.26±0.43	8.74±0.08	5.09±0.05	72.10±0.06	12.17±0.10	42.08±0.20	8.29±0.04	4.06±0.05	26.78±0.05	11.10±0.06
NHRDF Red-3 (L-652)	42.37±0.38	8.45±0.09	5.26±0.06	55.10±0.06	12.93±0.04	39.82±0.48	8.30±0.05	4.32±0.07	31.05±0.03	12.07±0.04
BhimaSafed	38.60±0.37	8.56±0.06	5.15±0.04	43.10±0.06	12.17±0.10	34.72±0.51	8.22±0.11	4.35±0.03	27.90±0.06	11.43±0.08
JRO 11 (GJRO 11)	46.55±0.38	8.65±0.06	5.33±0.05	53.25±0.14	13.50±0.29	43.20±0.52	8.40±0.09	4.78±0.04	35.72±0.03	12.57±0.02
Bhima Light Red	34.98±0.09	7.42±0.10	5.93±0.04	68.61±0.06	12.17±0.10	33.48±0.27	7.21±0.08	5.30±0.07	46.55±0.06	11.77±0.12
HOS 4 (Hisar onion 4)	41.62±0.23	9.06±0.02	5.81±0.02	56.16±0.09	14.03±0.02	38.62±0.28	8.62±0.07	5.33±0.17	39.63±0.07	13.03±0.02
GJWO 3	41.93±0.34	7.99±0.03	5.38±0.03	49.30±0.17	12.50±0.06	37.65±0.45	7.87±0.12	4.43±0.08	28.28±0.16	11.00±0.09
NHRDF Red-4 (L-744)	45.43±0.33	8.85±0.03	5.92±0.06	74.38±0.69	12.17±0.10	44.03±0.36	8.71±0.06	5.29±0.05	60.40±0.23	11.63±0.12
Pusa Shobha	41.77±0.25	7.40±0.12	5.37±0.04	64.38±0.47	16.80±0.03	39.90±0.18	7.25±0.06	5.35±0.05	44.12±0.07	13.80±0.06
Pusa Sona	39.48±0.33	7.66±0.05	5.68±0.09	60.20±0.53	12.90±0.06	37.90±0.34	7.60±0.03	4.72±0.05	37.06±0.03	12.17±0.10

POS35	43.22±0.18	8.30±0.02	6.18±0.02	77.48±0.34	12.43±0.02	42.20±0.25	8.27±0.14	5.62±0.07	65.95±0.03	12.00±0.03
POS36	43.25±0.45	8.35±0.06	5.87±0.08	66.95±0.12	13.37±0.06	42.26±0.32	8.15±0.08	5.02±0.05	55.44±0.25	12.30±0.17
POS39	41.30±0.26	8.79±0.05	5.81±0.05	52.65±0.20	15.20±0.12	38.33±0.16	7.90±0.06	4.58±0.03	41.83±0.07	13.37±0.05
POS37	43.20±0.23	8.70±0.09	5.69±0.30	70.65±0.09	12.77±0.06	42.55±0.26	8.48±0.17	5.54±0.04	56.89±0.06	12.07±0.04
Sukhsagar	40.73±0.44	8.12±0.05	5.05±0.03	51.26±0.15	14.50±0.06	35.47±0.19	7.60±0.12	4.04±0.02	31.67±0.19	11.60±0.12
PRO 6	39.60±0.41	7.66±0.09	5.67±0.08	59.79±0.12	15.53±0.06	38.13±0.20	7.60±0.07	4.90±0.07	39.10±0.06	12.57±0.02
JNDWO-85	43.27±0.26	8.44±0.04	5.02±0.04	53.10±0.06	12.33±0.19	40.00±0.60	8.36±0.21	4.56±0.06	38.95±0.03	11.17±0.10
NHRDF (L-920)	46.42±0.32	8.08±0.05	4.72±0.03	41.56±0.12	16.10±0.03	43.67±0.52	8.06±0.03	3.50±0.03	21.36±0.21	14.30±0.17

**Table S2.**Na<sup>+</sup>/K<sup>+</sup> ratios of selected onion accessions under control and salinity stress

Cultivars name	Root Na <sup>+</sup> /K <sup>+</sup>		Shoot Na <sup>+</sup> /K <sup>+</sup>		Bulb Na <sup>+</sup> /K <sup>+</sup>	
	Control	Salinity	Control	Salinity	Control	Salinity
POS35	1.29±0.07 <sup>f</sup>	3.25±0.25 <sup>cde</sup>	1.13±0.03 <sup>de</sup>	2.35±0.03 <sup>g</sup>	0.21±0.02 <sup>cd</sup>	0.30±0.02 <sup>de</sup>
L-28	1.57±0.06 <sup>de</sup>	3.29±0.09 <sup>bcd</sup>	0.89±0.04 <sup>f</sup>	1.65±0.04 <sup>i</sup>	0.25±0.01 <sup>ab</sup>	0.31±0.02 <sup>de</sup>
GJWO 1	1.15±0.07 <sup>fg</sup>	3.10±0.08 <sup>e</sup>	1.05±0.03 <sup>e</sup>	2.42±0.10 <sup>g</sup>	0.26±0.03 <sup>a</sup>	0.41±0.02 <sup>a</sup>
POS36	1.55±0.05 <sup>e</sup>	3.10±0.04 <sup>e</sup>	1.67±0.05 <sup>a</sup>	2.36±0.04 <sup>g</sup>	0.23±0.02 <sup>abc</sup>	0.26±0.01 <sup>f</sup>
POS37	1.30±0.04 <sup>f</sup>	3.31±0.07 <sup>bcd</sup>	1.06±0.06 <sup>e</sup>	1.44±0.10 <sup>j</sup>	0.23±0.01 <sup>abc</sup>	0.36±0.03 <sup>b</sup>
L-744	1.28±0.05 <sup>f</sup>	3.20±0.05 <sup>cde</sup>	0.95±0.05 <sup>f</sup>	1.92±0.08 <sup>h</sup>	0.25±0.02 <sup>ab</sup>	0.29±0.02 <sup>def</sup>
POS38	2.16±0.11 <sup>b</sup>	3.32±0.10 <sup>bcd</sup>	1.46±0.10 <sup>b</sup>	2.64±0.04 <sup>f</sup>	0.23±0.01 <sup>abc</sup>	0.28±0.02 <sup>ef</sup>
ALR	2.07±0.07 <sup>b</sup>	3.46±0.16 <sup>b</sup>	1.37±0.07 <sup>c</sup>	3.88±0.08 <sup>a</sup>	0.26±0.01 <sup>a</sup>	0.31±0.01 <sup>de</sup>
GJWO 3	1.71±0.10 <sup>cde</sup>	3.38±0.08 <sup>bc</sup>	1.45±0.03 <sup>bc</sup>	3.78±0.06 <sup>b</sup>	0.25±0.01 <sup>ab</sup>	0.32±0.03 <sup>cd</sup>
KRR	2.48±0.18 <sup>a</sup>	3.79±0.11 <sup>a</sup>	1.13±0.05 <sup>de</sup>	3.79±0.04 <sup>b</sup>	0.22±0.02 <sup>bcd</sup>	0.38±0.04 <sup>ab</sup>
L-652	1.76±0.04 <sup>c</sup>	3.76±0.11 <sup>a</sup>	1.59±0.03 <sup>a</sup>	3.63±0.15 <sup>c</sup>	0.24±0.01 <sup>abc</sup>	0.36±0.03 <sup>b</sup>

Agrifound White	1.73±0.05 <sup>cd</sup>	3.66±0.06 <sup>a</sup>	1.13±0.05 <sup>d<sup>e</sup></sup>	3.66±0.05 <sup>c</sup>	0.19±0.02 <sup>d</sup>	0.30±0.01 <sup>de</sup>
L-920	1.05±0.05 <sup>g</sup>	3.29±0.09 <sup>bcd</sup>	0.71±0.02 <sup>g</sup>	2.76±0.06 <sup>e</sup>	0.24±0.01 <sup>abc</sup>	0.35±0.03 <sup>bc</sup>
Bhima Dark Red	2.13±0.03 <sup>b</sup>	3.14±0.14 <sup>de</sup>	1.21±0.03 <sup>d</sup>	3.47±0.07 <sup>d</sup>	0.19±0.01 <sup>d</sup>	0.37±0.01 <sup>b</sup>

Numerical Values are represented as Mean ± SD, means comparison was performed through, Duncan's Multiple Range Test (DMRT), Values with the same letter as super script are not significantly different.

**Table S3.** Regression coefficient, standard error, and significance of the prioritized traits entered into the predicted response for salinity stress tolerance

Variables in equation	Regression coefficients (βs)	Standard Error(SE)	t -Value	Pr(> t )	F-to-Remove
Constant	-409.75				
BD	21.38	1.91	11.18	0.000	125.06
PH	2.28	0.20	11.10	0.000	123.25
APX	0.52	0.06	8.24	0.000	67.85
gS	-137.77	39.75	-3.47	0.002	12.01
POX	1.21	0.23	5.21	0.000	27.17
CAT	-1.47	0.52	-2.85	0.008	8.14
MDA	3.21	0.72	4.45	0.000	19.82
MSI	1.44	0.42	3.44	0.001	11.81
Bulb Na <sup>+</sup> /K <sup>+</sup>	33.57	14.29	2.35	0.025	5.52

**Predicted bulb yield = -409.75+ (21.38 × BD) + (2.28 × PH) + (0.52× APX) + (-137.77× gS) +(1.21 × POX) + (-1.47 × CAT) + (3.21 × MDA) + (1.44 × MSI) + (Bulb Na<sup>+</sup> /K<sup>+</sup>)**

#BD-Bulb diameter, PH-Plant height, APX-Ascorbate peroxidase, gS-Stomatal conductance, POX-Peroxidase, CAT-Catalase, MDA-Malondialdehyde, MSI-Membrane Stability Index, Bulb Na<sup>+</sup> /K<sup>+</sup>