

## **Nutrient-coated urea mitigates deleterious impacts of salinity and supports wheat performance by enhancing antioxidant activities, photosynthetic performance and nitrogen use efficiency**

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**Table S1. ANOVA sources, F-values and significance in plant growth, photosynthetic pigments, and leaf water status.**

Source	D F	SFW	SDW	RFW	DRW	LPP	Chl. a	Chl. b	Car.	RWC
SS	2	326.11**	213.82**	221.13**	198.12**	332.34**	239.26**	784.01*	834.35*	839.11*
UT	2	938.35**	986.58**	802.34**	606.4*	983.24**	191.53*	1529.76**	3674.23**	3026.86**
SS×UT	4	2.82 <sup>NS</sup>	2.46 <sup>NS</sup>	4.33*	3.25 <sup>NS</sup>	10.65*	5.64*	46.93**	14.15**	27.72**

SS: salinity stress, UT: urea types, SFW and SDW are shoot fresh and dry weights and RFW and DRW are root fresh and dry weights. LPP: leaves per plant, Chl. chlorophyll, Car: carotenoids, RWC: relative water contents. \* and \*\* indicates significant at  $P \leq 0.05$  and  $P \leq 0.01$ , respectively.

**Table S2. ANOVA sources, F-values, and significance in plant oxidative stress markers, osmolytes and antioxidant activities.**

Source	D F	EL (%)	MDA	H <sub>2</sub> O <sub>2</sub>	TSP	FAA	CAT	POD	APX	Anth.
SS	2	900.66*	441.12**	819.82*	478.29*	831.91*	1052.37**	193.34**	505.72**	862.37*
UT	2	1791.06**	761.35**	1256.71**	1499.46**	2046.02**	1757.39**	702.68**	830.15**	3627.81**
SS×UT	4	16.64**	14.32*	13.98**	15.95**	55.68**	5.20*	1.47 <sup>NS</sup>	3.51*	6.03**

SS: salinity stress, UT: urea types, EL: electrolyte leakage, MDA: malondialdehyde, H<sub>2</sub>O<sub>2</sub>: hydrogen peroxide, TSP: total soluble proteins: FAA: free amino acids. \*and \*\* indicates significant at  $P \leq 0.05$  and  $P \leq 0.01$ , respectively.

**Table S3. ANOVA sources, F-values, and significance in yield traits and nitrogen use efficiency.**

Source	DF	SL	TPP	SLPS	GPS	100-GW	GYPP	BYPP	1
SS	2	1119.21**	322.63**	808.71**	480.63**	374.28**	323.66**	145.68**	3
UT	2	1954.60**	1151.46**	2990.89**	3512.71**	1945.53**	1012.65**	465.56**	4
SS×UT	4	46.08**	33.15*	22.30**	5.32*	5.43*	5.50**	2.60 <sup>NS</sup>	1

SS: salinity stress, UT: urea types, SL: spike length: TPP: tillers per plant, SLPS: spikelets/spike, GPS: grains/spike, 100 GW: grain weight, GYPP: grain yield per plant and BYPP: biological yield per plant. \* and \*\* indicates significant at  $P \leq 0.05$  and  $P \leq 0.01$ , respectively.

**Table S4. ANOVA sources, F-values, and significance in element (Na, K, Cl and N) concentrations in plant roots and shoots.**

Source	D F	Root Na	Shoot Na	Root K	Shoot K	Root Cl	Shoot Cl	Root N	Shoot N
SS	2	105.12 <sup>*</sup>	119.12 <sup>*</sup>	612.51 <sup>**</sup>	711.51 <sup>**</sup>	114.53 <sup>*</sup>	158.42 <sup>*</sup>	713.27 <sup>**</sup>	802.92 <sup>**</sup>
UT	2	256.33 <sup>*</sup>	202.29 <sup>*</sup>	2201.90 <sup>*</sup>	1813.90 <sup>*</sup>	192.44 <sup>*</sup>	172.33 <sup>*</sup>	1671.89 <sup>*</sup>	1992.89 <sup>*</sup>
SS×U T	4	2.34 <sup>NS</sup>	3.43 <sup>*</sup>	19.28 <sup>**</sup>	16.56 <sup>**</sup>	4.51 <sup>*</sup>	3.98 <sup>*</sup>	24.30 <sup>**</sup>	18.76 <sup>**</sup>

SS: salinity stress, UT: urea types, Na: sodium, K: potassium, Cl: chloride, and N: nitrogen. \* and \*\* indicates significant at  $P \leq 0.05$  and  $P \leq 0.01$ , respectively.