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*Functional Plant Biology*

### Supplementary Material

#### **Effect of salt, alkali and combined stresses on root system architecture and ion profiling in a diverse panel of oat (*Avena* spp.)**

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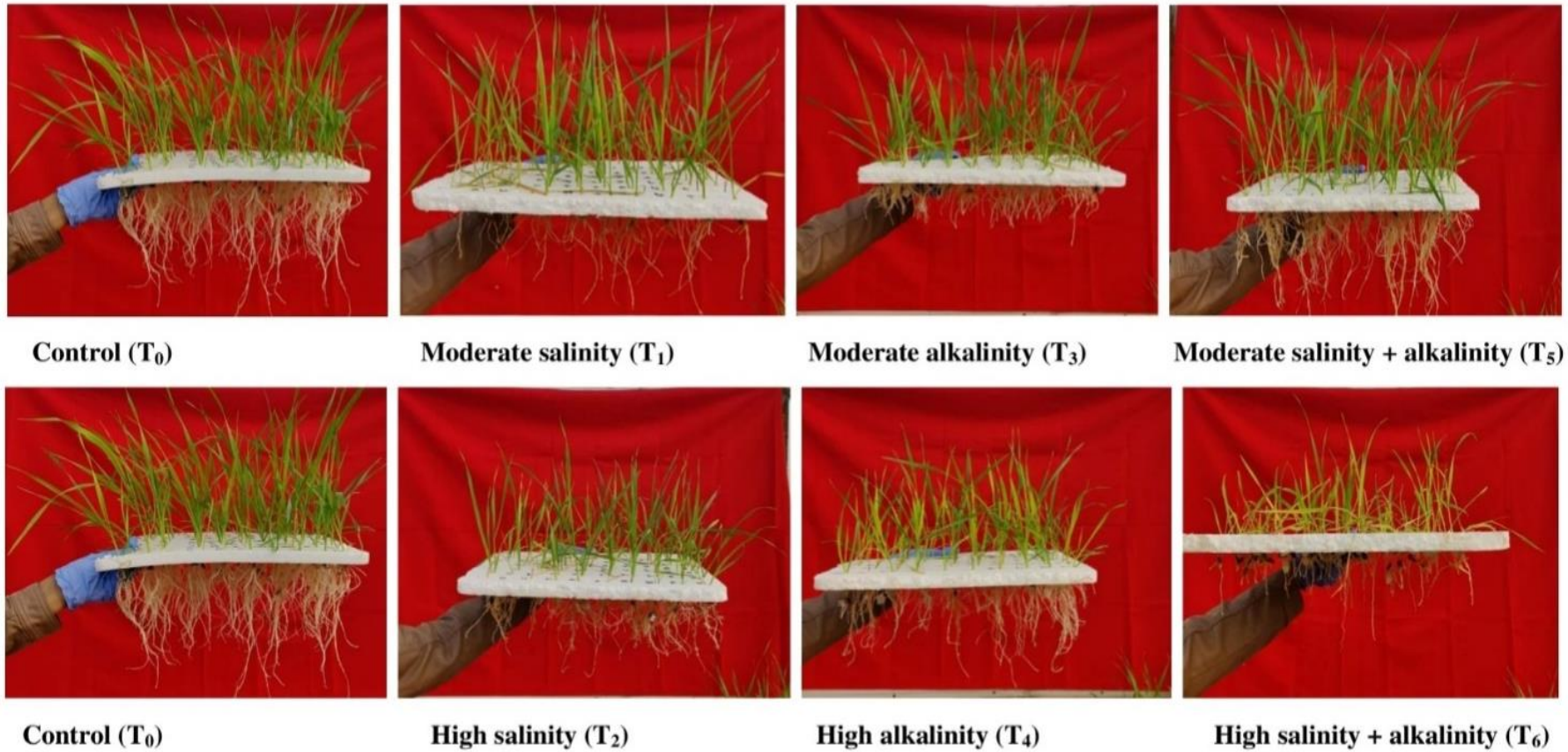
**Table S1 Oat accession's identity used in the experiment.**

<b>S. No.</b>	<b>Accession No.</b>	<b>Institute Identity</b>	<b>Species</b>	<b>Country of origin</b>
G1	JHO-2010-1	Cultivar	<i>Avena sativa</i>	India
G2	JHO-2009-1	Cultivar	<i>Avena sativa</i>	India
G3	UPO-94	Cultivar	<i>Avena sativa</i>	India
G4	EC-537799	IG-20-714	<i>Avena abyssinica</i>	USA
G5	EC-537795	IG-20-764	<i>Avena abyssinica</i>	USA
G6	EC-537808	IG-20-763	<i>Avena brevis</i>	USA
G7	EC-537803	IG-20-762	<i>Avena barbata</i>	-
G8	EC-537821	IG-20-782	<i>Avena macrocana</i>	-
G9	IGO-5-1	IG-20-817	<i>Avena spp.</i>	-
G10	78 (Accession No)	IG-20-894	<i>Avena spp.</i>	-
G11.	EC-246121	IG-20-718	<i>Avena sativa</i>	Brazil
G12.	EC-537854	IG-20-748	<i>Avena sativa</i>	USA
G13.	IG-20-R110	IG-20-1004	<i>Avena sativa</i>	India
G14.	IG-20-R131	IG-20-1025	<i>Avena sativa</i>	India
G15.	IG-20-R299	IG-20-1183	<i>Avena sativa</i>	India
G16.	IC-372413	IG-20-347	<i>Avena sativa</i>	India
G17.	IG-20-R304	IG-20-1188	<i>Avena sativa</i>	India
G18.	31/12.	IG-20-449	<i>Avena sativa</i>	India
G19.	2/5/6.	IG-20-425	<i>Avena sativa</i>	India
G20.	NGB8650	IG-20-678	<i>Avena sativa</i>	Sweden
G21.	IC282934	IG-20-1280	<i>Avena sativa</i>	India

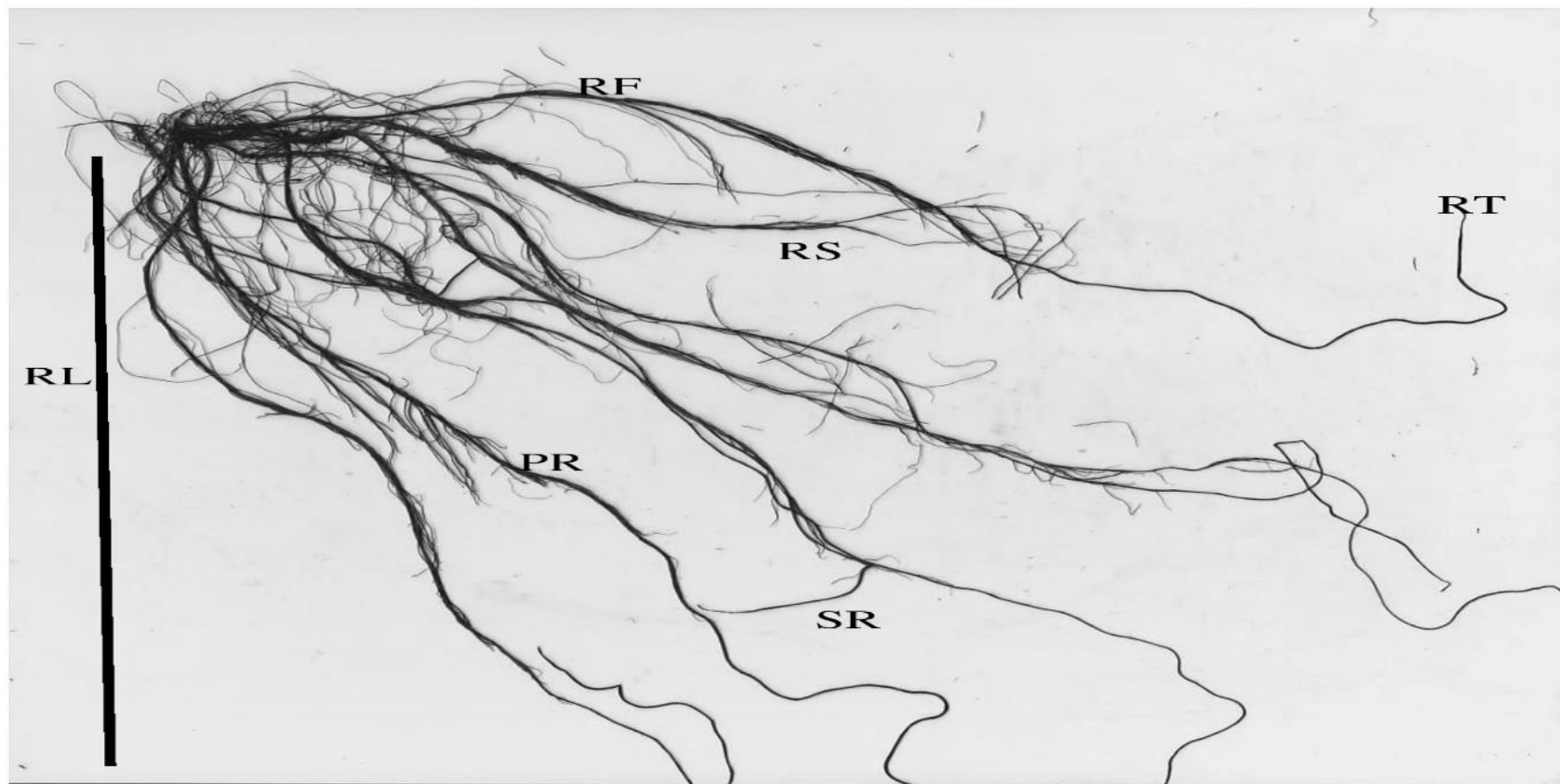
\* G represent the germplasm

**Table-S2: Composition of a modified Hoagland nutrient solution for growing oat plants**  
(Adapted from Epstein 1972).

Compound	MW g mol <sup>-1</sup>	Conc.of stock solution mM	Conc.of stock solution gL <sup>-1</sup>	Volume of stock solution per L of final solution mL	Elem ent	Final concentr ation of element μM	ppm
Macronutrients							
KNO <sub>3</sub>	101.10	1,000	101.10	6.0	N	1,6000	224
Ca(NO <sub>3</sub> ) <sub>2</sub> .4H <sub>2</sub> O	236.16	1,000	236.16	4.0	K	6,000	235
NH <sub>4</sub> H <sub>2</sub> PO <sub>4</sub>	115.08	1,000	115.08	2.0	Ca	4,000	160
MgSO <sub>4</sub> .7H <sub>2</sub> O	246.48	1,000	246.48	1.0	P	2,000	62
					S	1,000	32
					Mg	1,000	24
Micronutrients							
KCL	74.55	25	1.864		Cl	50	1.77
H <sub>3</sub> BO <sub>3</sub>	61.83	12.5	0.773		B	25	0.27
MnSO <sub>4</sub> .H <sub>2</sub> O	169.01	1.0	0.169	2.0	Mn	2.0	0.11
ZnSO <sub>4</sub> .7H <sub>2</sub> O	287.54	1.0	0.288		Zn	2.0	0.13
CuSO <sub>4</sub> .5H <sub>2</sub> O	249.68	0.25	0.062		Cu	0.5	0.03
H <sub>2</sub> MoO <sub>4</sub> (85% MoO <sub>3</sub> )	161.97	0.25	0.040		Mo	0.5	0.05
NaFeDTPA	468.20	64	30.0	0.3-1.0	Fe	16.1-53.7	1.00- 300



**Supplementary Fig. S1. Response of hydroponically grown oat germplasm under different stress combinations.**



Supplementary Fig. S2. Root structure architecture (RSA) of oat crop