

Novel phenotyping pipeline reveals major seedling root growth QTL in hexaploid wheat

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SUPPLEMENTARY MATERIAL

Supplementary Table 1. Root system trait values

Supplementary Table 2. Correlation matrix for measured traits

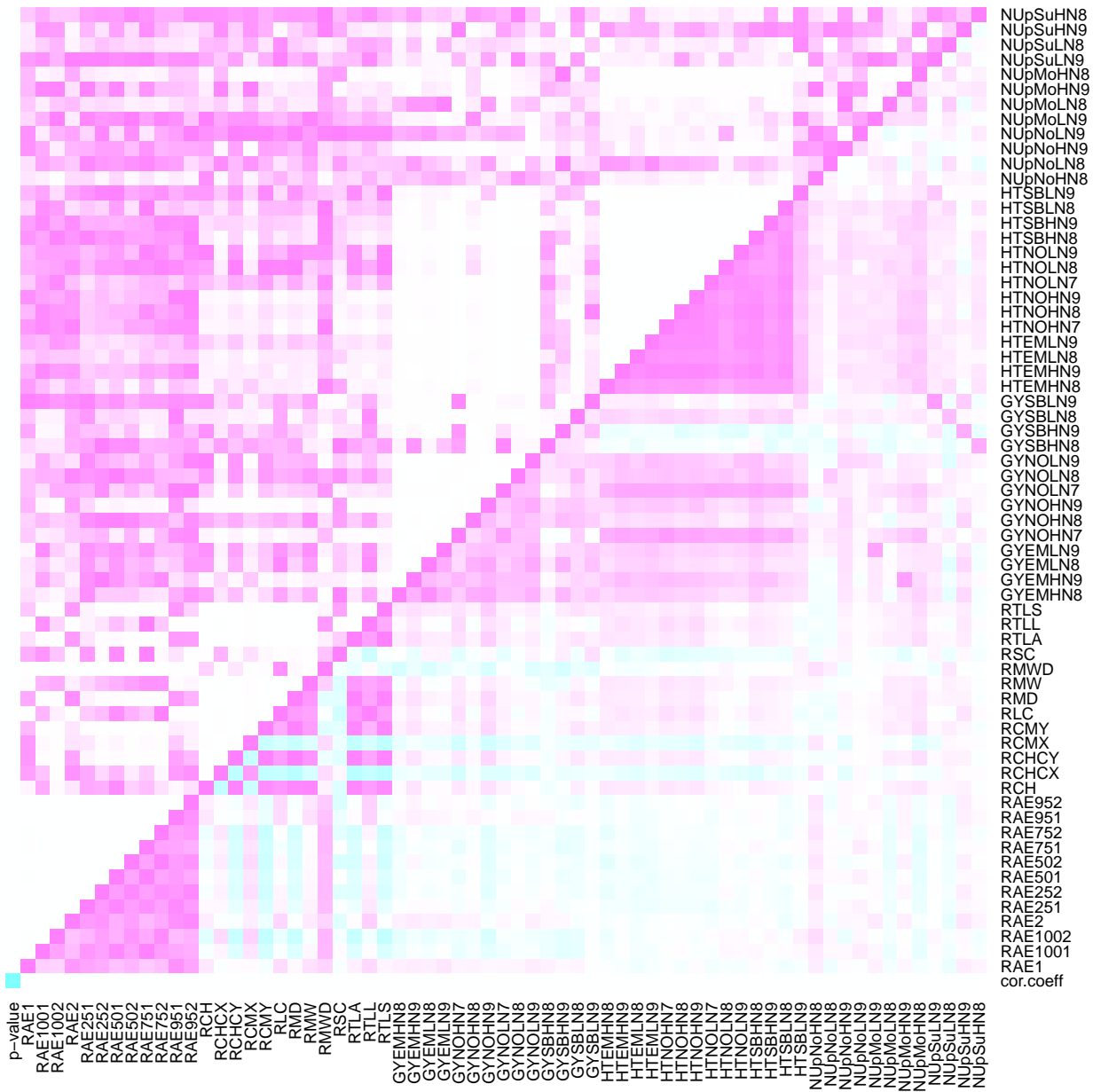
Supplementary Figure 1. Frequency distribution of measured root traits

Supplementary Figure 2. Distribution of field traits

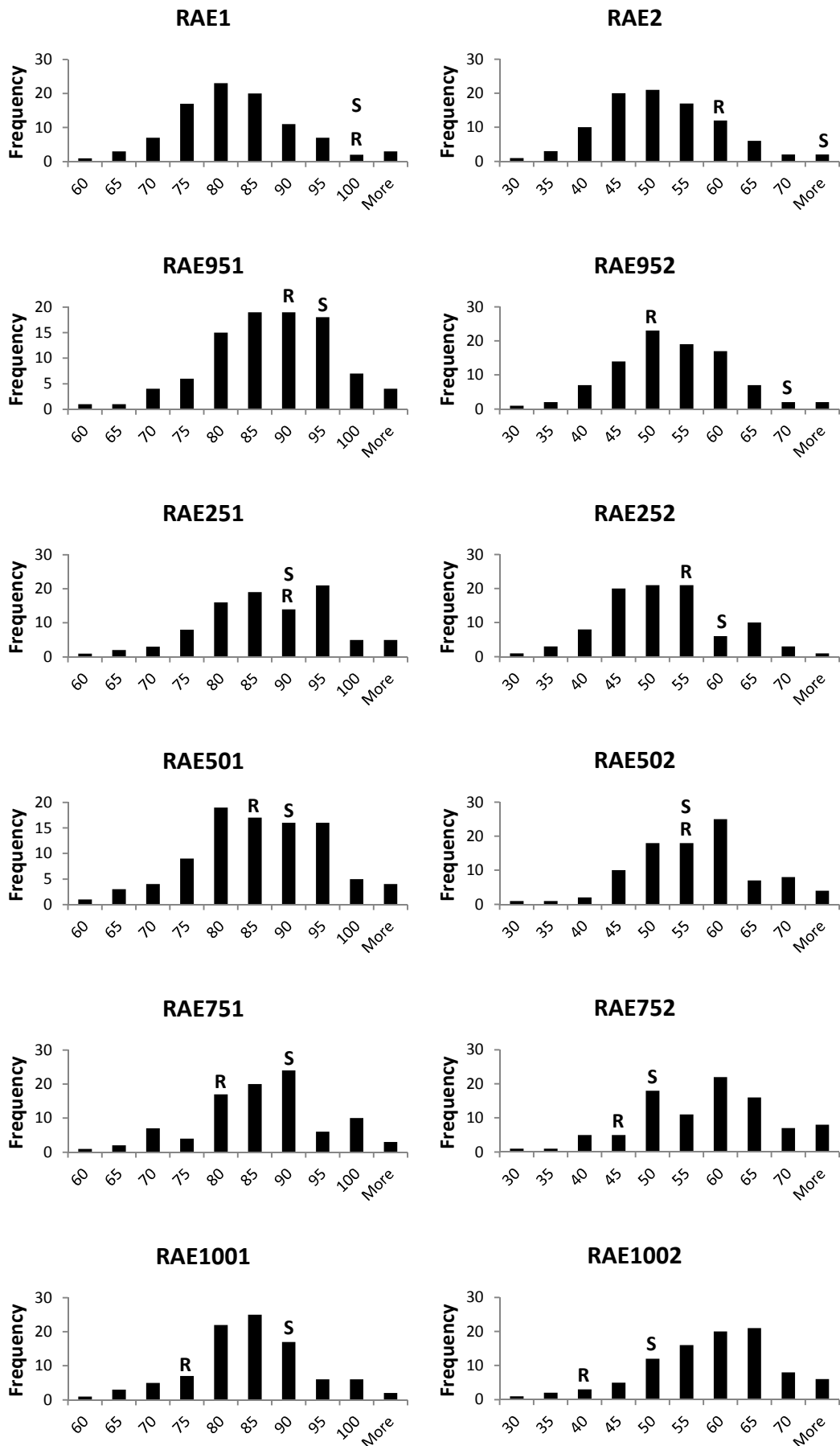
Supplementary Table 1. Mean root system traits (RIA = Rialto, SAV = Savannah)

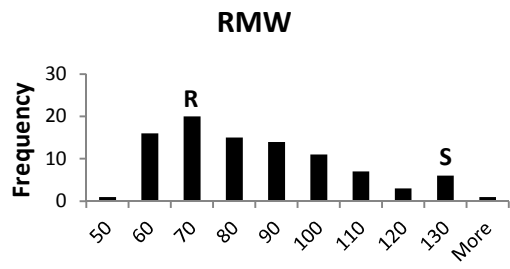
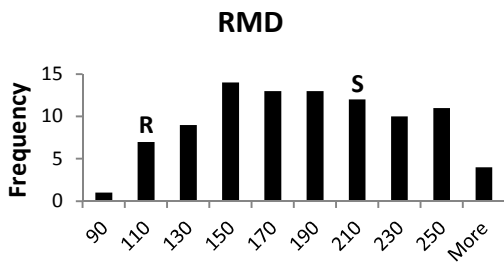
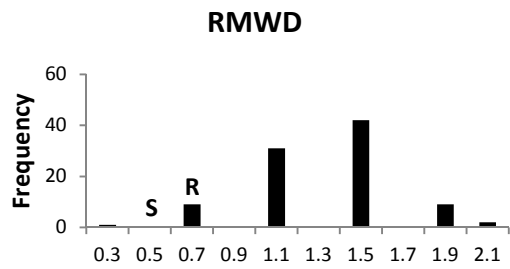
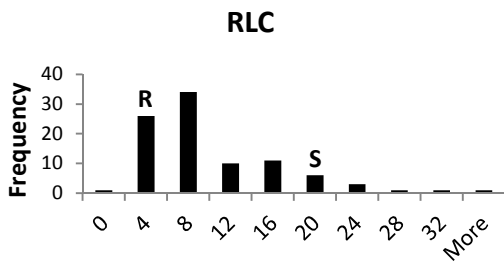
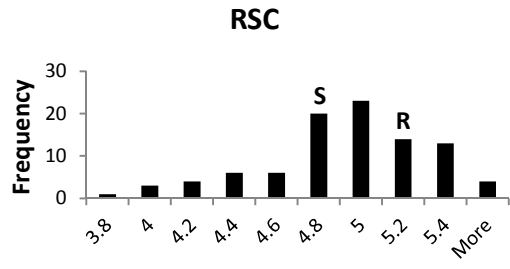
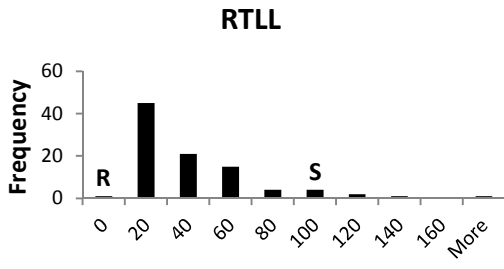
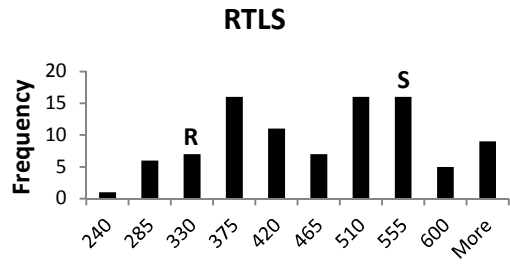
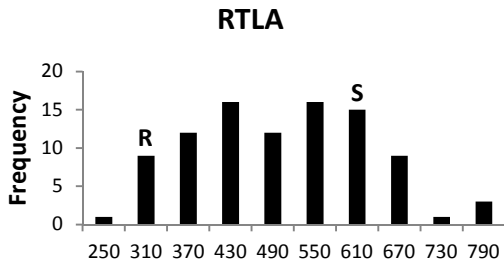
Trait	RIA	SD	Min	Max	SAV	SD	Min	Max	DH	SD	Min	Max
TLA (mm)	354.1	98.8	197	676	664.2	162	362.2	995.6	483.5	181.2	118.0	1191.1
TLL (mm)	16.4	20.5	0.0	92.3	105.0	78.9	1.2	323.4	32.6	43.4	0.0	340.9
TLS (mm)	337.7	82.5	195.5	583.7	559.2	100	360.9	733.9	450.9	151.7	118.0	1033.8
RAE1 (°)	101.7	21.5	56.2	141.78	100.8	19.5	60.1	142.3	93.6	29.9	5.0	203.7
RAE2 (°)	63.6	23.7	32.0	106.11	76.5	15.8	48.3	101.7	63.5	23.1	8.3	143.0
RLC	5.3	4.9	0.0	18	23.9	14.7	1.0	56.0	9.4	10.5	0.0	62.0
RSC	5.2	0.4	5.0	6	4.8	0.5	4.0	6.0	4.7	0.7	2.0	7.0
RCH (mm ²)	3910	2444	1170	12350	17243	8283	5281	35350	9152	6823	402	39353
RMW (mm)	71.6	23.7	21.5	122.9	136.8	47.5	50.8	212.5	89.2	43.0	5.7	239.1
MD (mm)	110.8	22.1	80.0	185.5	226.3	46.9	130.1	298.1	166.3	54.1	49.7	310.3
MWD	0.7	0.2	0.2	0.95	0.6	0.2	0.2	1.0	0.6	0.2	0.0	1.5
RCMX (mm)	0.2	3.4	-5.8	7.8	-0.5	5.8	-10.6	8.2	-1.9	6.4	-37.3	30.4
RCMY (mm)	28.9	6.7	17.5	48.3	58.5	10.2	36.7	78.2	50.6	17.5	11.5	100.9
RCHCX (mm)	0.9	5.2	-9.9	15.3	-2.8	15.2	-33.7	24.8	-4.1	9.7	-52.2	28.6
RCHCY (mm)	44.0	12.5	26.9	85.3	100.7	20.2	57.8	136.5	76.9	28.9	15.8	159.2
RAE951 (°)	94.1	19.7	48.3	117.08	96.0	16.6	67.4	131.6	88.2	22.2	0.4	185.5
RAE952 (°)	53.9	22.5	26.0	97.27	71.3	19.7	46.4	118.6	59.0	21.6	5.8	128.7
RAE251 (°)	92.9	19.9	44.6	115.99	90.3	9.3	66.6	102.9	84.4	20.8	6.6	161.1
RAE252 (°)	55.8	19.1	28.9	92.75	64.0	12.7	46.4	85.5	56.4	20.2	2.8	115.6
RAE502 (°)	85.4	23.3	25.2	114.24	91.0	10.8	65.7	104.4	79.6	20.8	5.1	140.6
RAE502 (°)	55.3	17.9	23.4	82.42	55.3	17.7	24.9	80.3	50.6	19.5	0.5	102.8
RAE751 (°)	81.6	22.0	26.1	110.28	90.8	15.7	59.3	116.4	76.9	21.3	2.4	168.1
RAE752 (°)	48.7	20.1	4.9	74.12	53.4	17.1	24.5	74.9	47.3	18.7	1.6	101.1
RAE1001 (°)	77.1	21.6	27.4	110.09	90.5	18.6	57.2	123.9	74.7	22.3	4.9	185.5
RAE1002 (°)	41.4	19.0	1.9	69.14	52.9	13.8	30.5	71.5	43.9	17.8	3.3	96.7

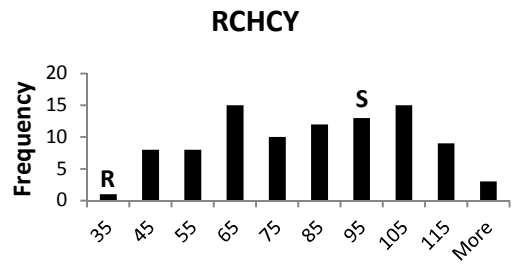
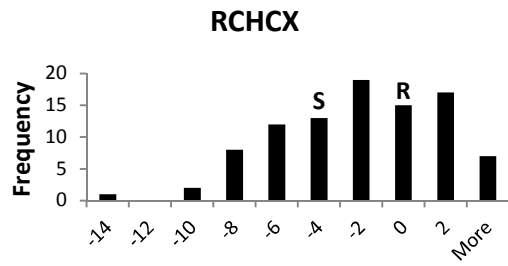
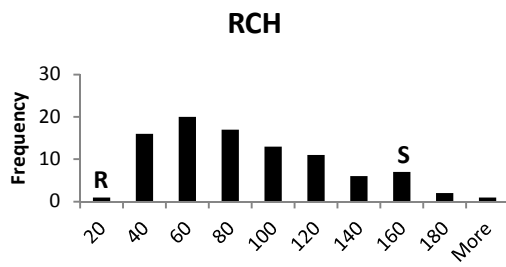
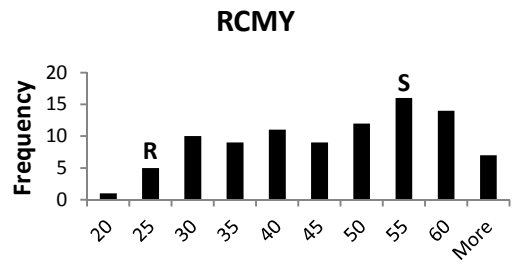
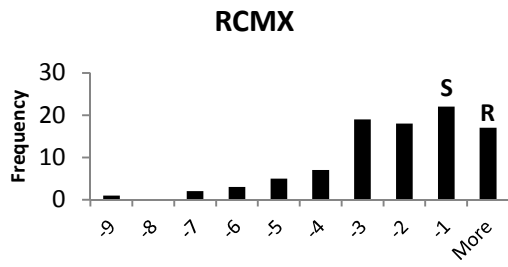
Supplementary Table 2. Correlation matrix for all measured traits



Supplementary Figure 1. Frequency distributions of measured root traits







Supplementary Figure 2. Distribution of field traits

