



### Analysis of Variance

Different source	SS	df	MS	F	P-value	F crit
Genotypes	441.74	39	11.33	7.95	3.84E-15	1.55
Errors	113.94	120	1.42			
Total	555.68	159				

#### Additional file 4. The investigation of lateral root numbers among RILs

The figure shows the variation of lateral root density among RILs. 40 RILs were investigated 8 days after germination, 4 plants per genotype were investigated for lateral root density. Lateral root numbers in primary root were counted manually and was divided by the total length of the primary root as a parameter for lateral root density (De Smet et al. 2012). Analysis of variance for the lateral root density among 40 RILs were performed .