



Additional file 4: figure S1. Pigment distribution and correlation analysis among cyanidin derivatives Cy3XG, Cy3XGG, Cy3XSGG and Cy3XFGG, and ‘root total pigment estimate’ (RTPE) in 70349 population. Only plants with root purple pigmentation (N=208) were evaluated by HPLC anthocyanin analysis. **A.** Relative content (%) of four cyanidin derivatives in 208 purple-rooted individuals of 70349. **B.** Scatter plot for pairwise correlations among anthocyanin pigments content (%) and RTPE. Circles indicate individuals with $\text{Cy3XGG} < 22\%$ and $\text{Cy3XGG} > 60\%$.

Additional file 4: table S2. Pair-wise Spearman rank correlation values among root anthocyanin pigments in 70349

	RTPE	Cy3XG	Cy3XFGG >0.2	Cy3XFGG <0.2	Cy3XSGG >0.1	Cy3XSGG <0.1
Cy3XG	-0.24					
Cy3XSGG	0.34	0.01				
Cy3XFGG	0.005	-0.54				
Cy3XGG<0.2	-0.23	0.65	-0.48		0.12	
Cy3XGG>0.6	0.44	-0.47		-0.66		-0.22
Cy3XFGG>0.2					-0.87	
Cy3XFGG<0.2						0.14

Significant correlations ($P < 0.001$) are indicated in bold.