

**Table S1 Variance components as a proportion of the total variance.**

Variance Components	P_A*	M_A*	P_AD*	M_AD*	P_A#A*	M_A#A*	P_D#D*	M_D#D*	P_A#D*	M_A#D*
Incomplete block	0.218	0.207	0.227	0.217	0.228	0.234	0.228	0.233	0.228	0.234
Additive (Add)	0.320	0.347	0.235	0.199	0.233	0.088	0.228	0.139	0.231	0.125
Dominance (Dom)			0.056	0.117	0.055	0.022	0.058	0.009	0.056	0.006
Epistasis Add x Add					0.000	0.154				
Epistasis Dom x Dom							0.000	0.121		
Epistasis Add x Dom									0.000	0.135
Culture x Add	0.017	0.013	0.010	0.014	0.000	0.001	0.008	0.008	0.008	0.006
Culture x Dom			0.012		0.000	0.000	0.000	0.000	0.000	0.000
culture x (Add x Add)					0.026	0.025				
culture x (Dom x Dom)							0.019	0.019		
culture x (Add x Dom)									0.018	0.020
Residual variance	0.445	0.433	0.460	0.452	0.459	0.475	0.458	0.471	0.459	0.473
Total Variance	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

\*Each column represents a different model. See Table 1 for model description