

Table S3 Length of chains, burn-in and hyper-parameters for Bayesian methods.

Method	Length of Chain	Burn-in	π	Effect dist. and parameters
BayesSSVS	100,000	10,000	0.999	Normal Var estimated
BayesC	160,000 5,200,000*	30,000 200,000*	Estimated	Normal Var estimated
BayesB1	160,000 5,200,000*	30,000 200,000*	Estimated	Scaled Student-t df= estimated Scale= estimated
BayesB2	5,200,000*	200,000*	estimated	Scaled Student-t df=4 Scale= estimated
BayesA1	160,000	30,000	-	Scaled Student-t df= estimated Scale= estimated
BayesA2	5,200,000*	200,000*	-	Scaled Student-t df= 4 Scale= estimated
Lasso1	160,000 5,200,000*	30,000 200,000*	-	Laplace rate=estimated
Lasso2	100,000	10,000	-	Laplace
RR-BLUP	100,000	10,000	0.0	Normal Var estimated

* chain used for analysis of pine and wheat dataset