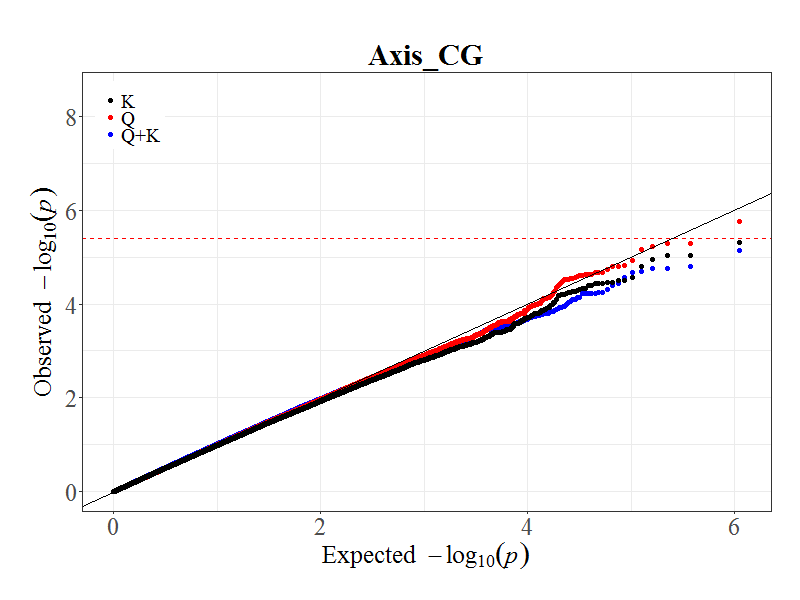
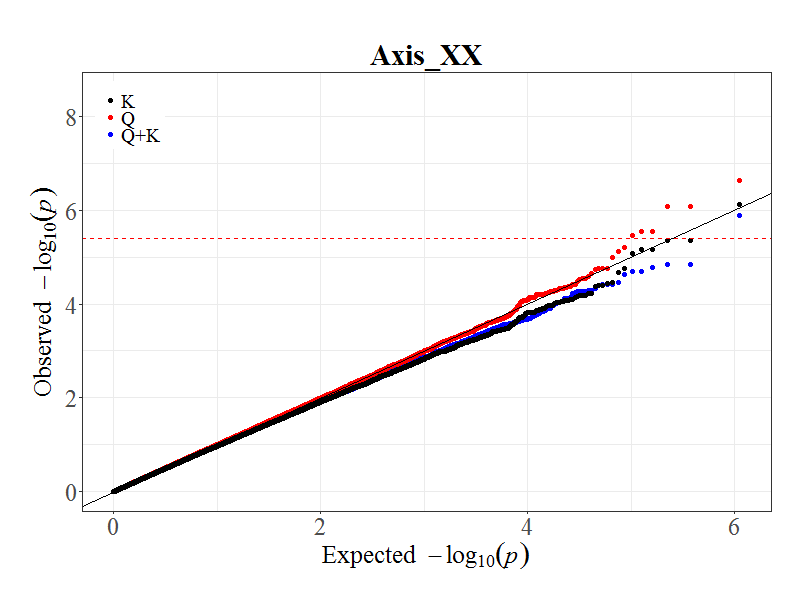
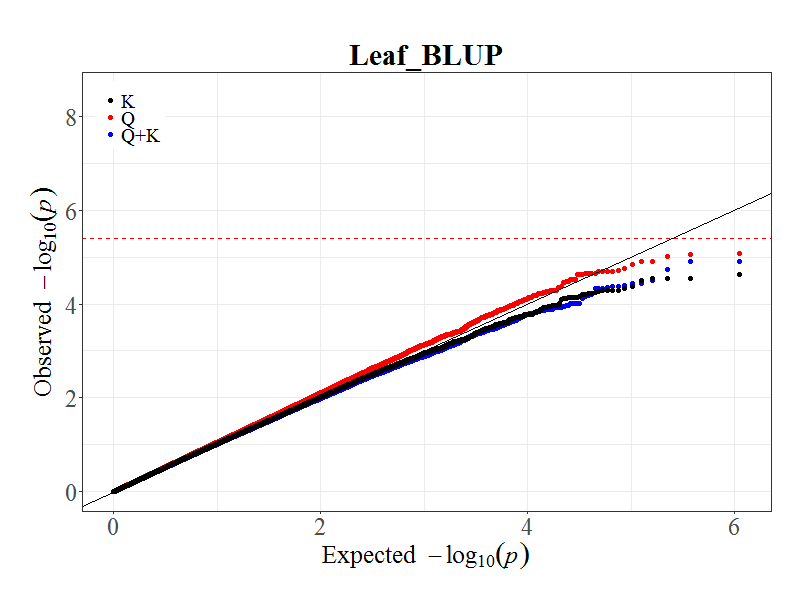
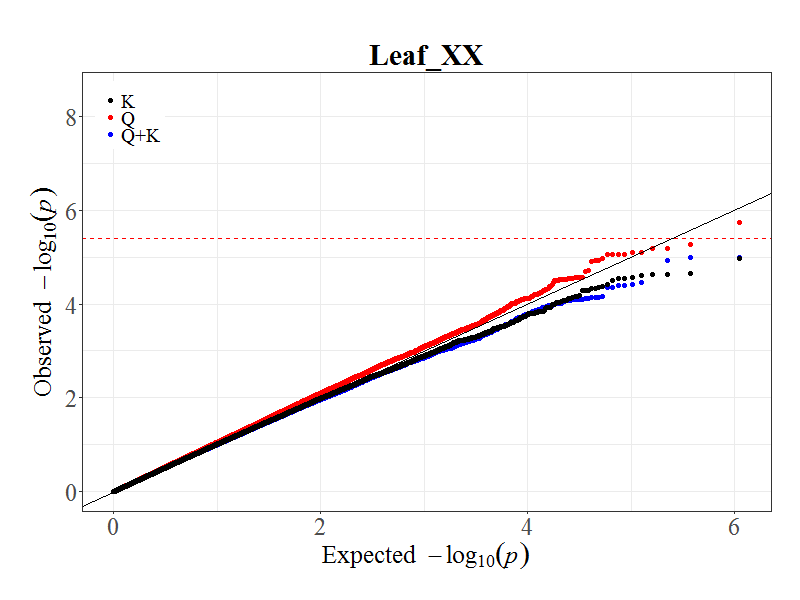
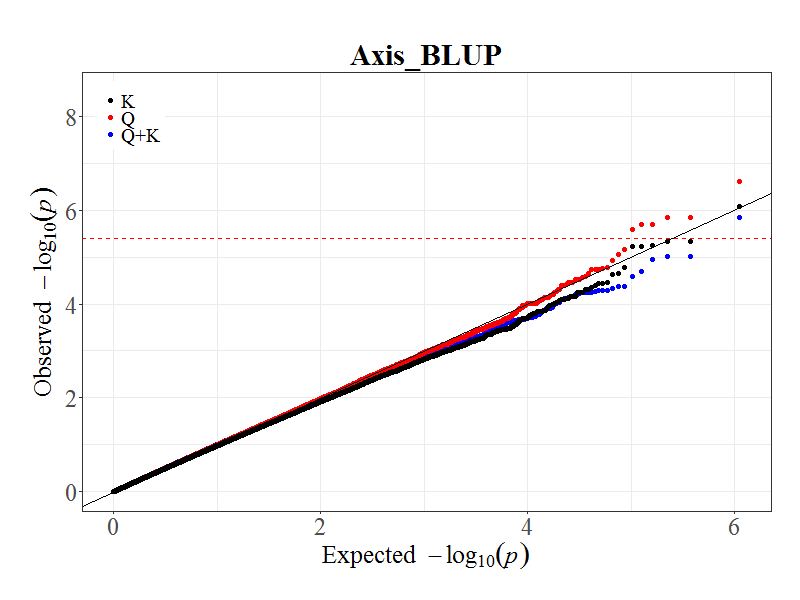
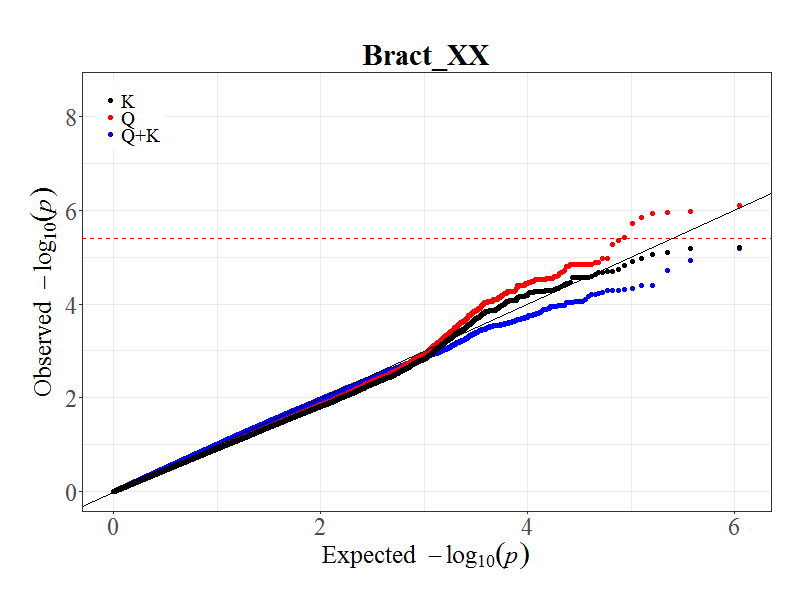
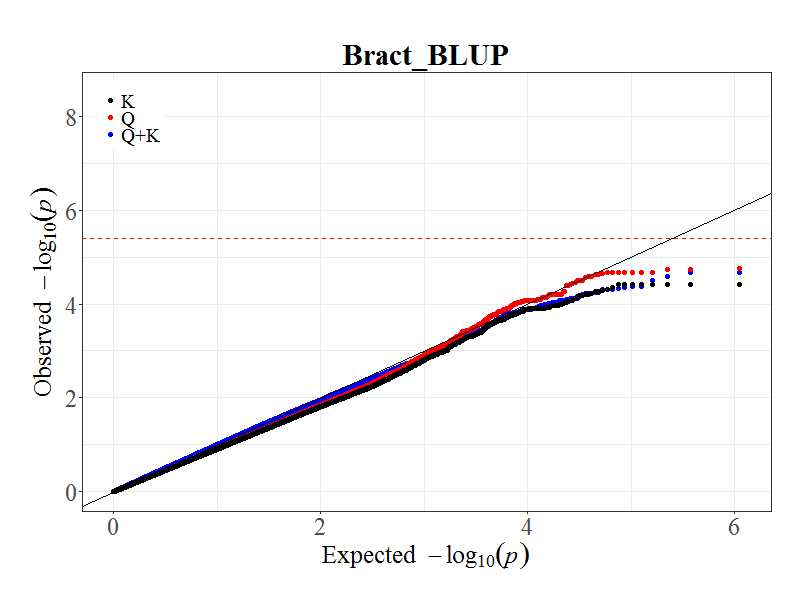
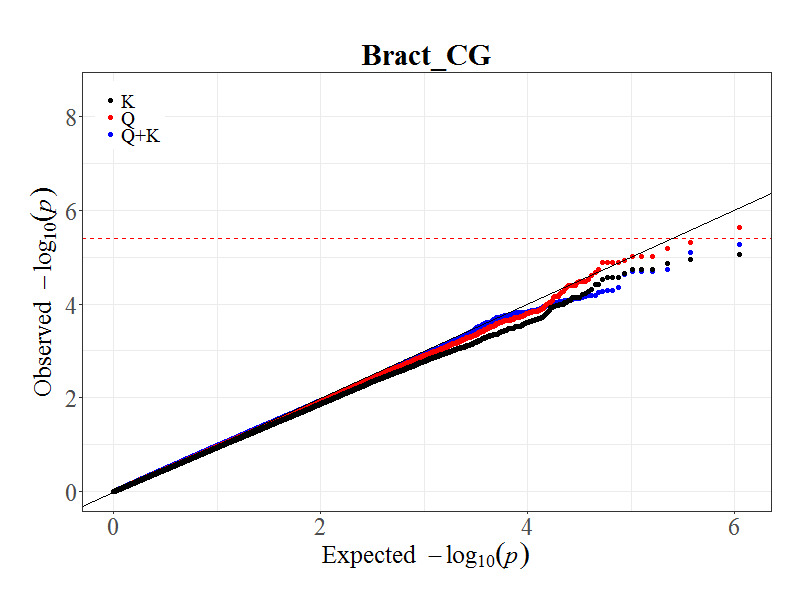
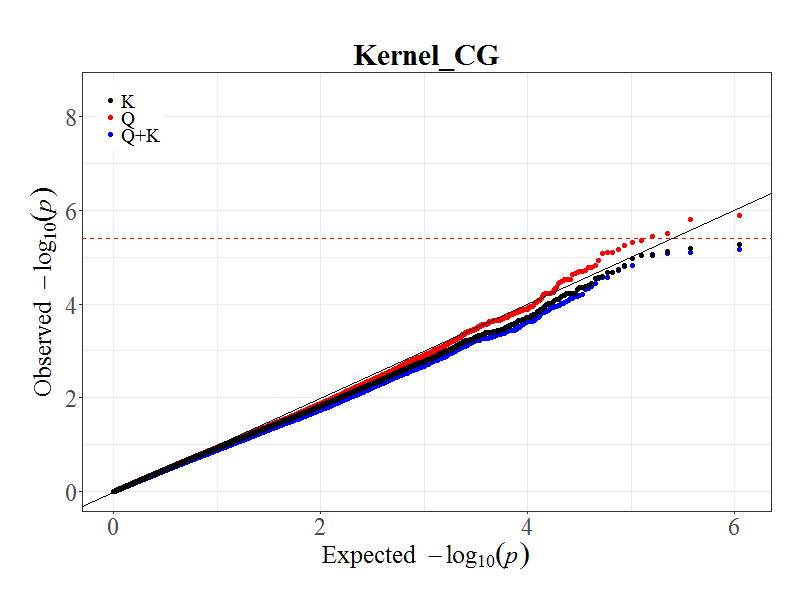
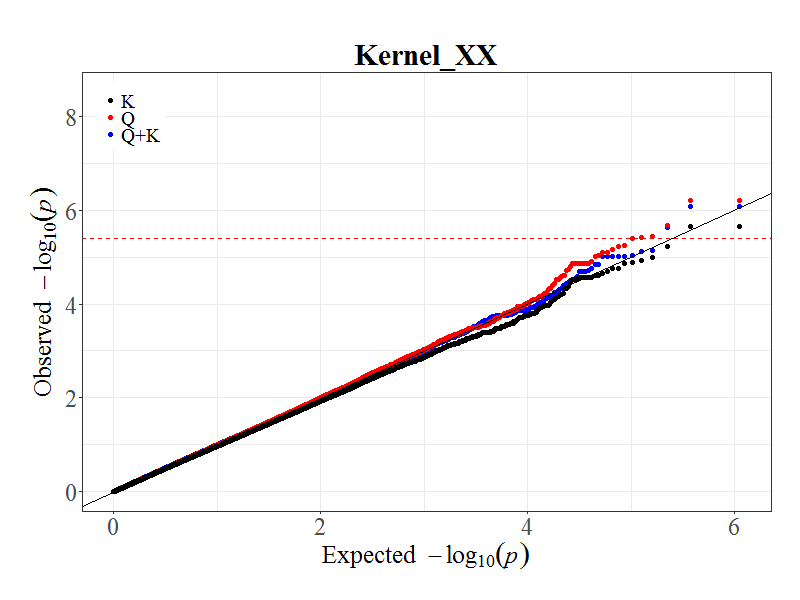
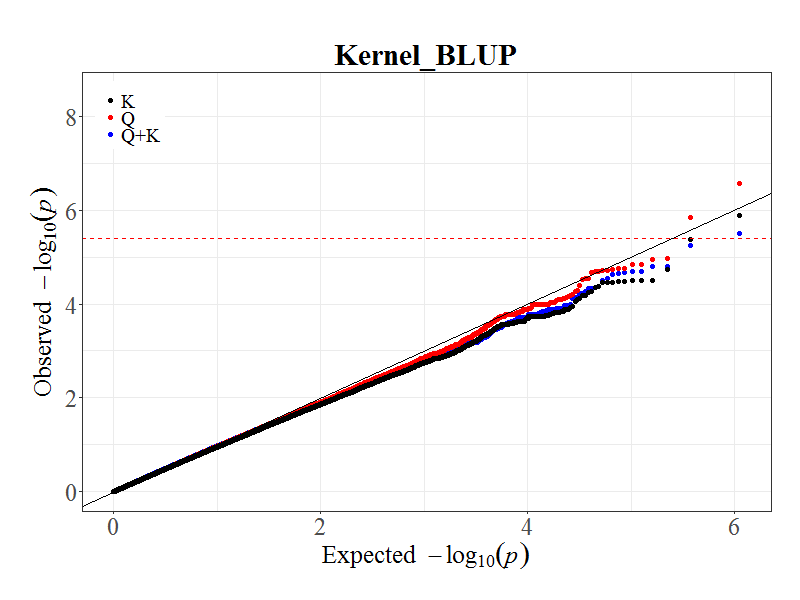
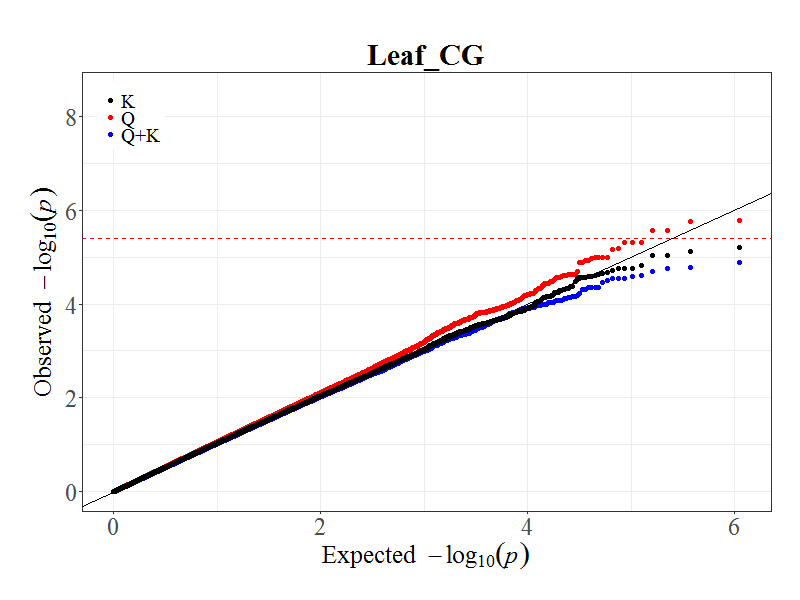
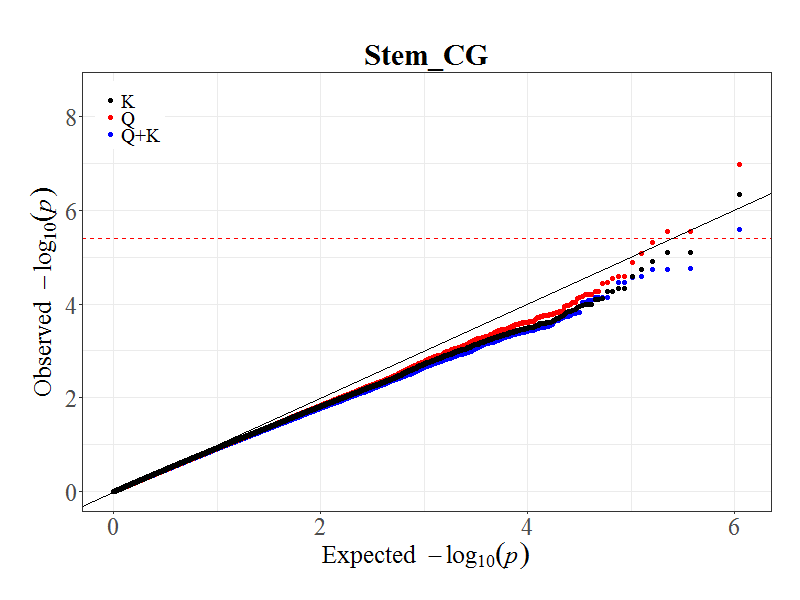
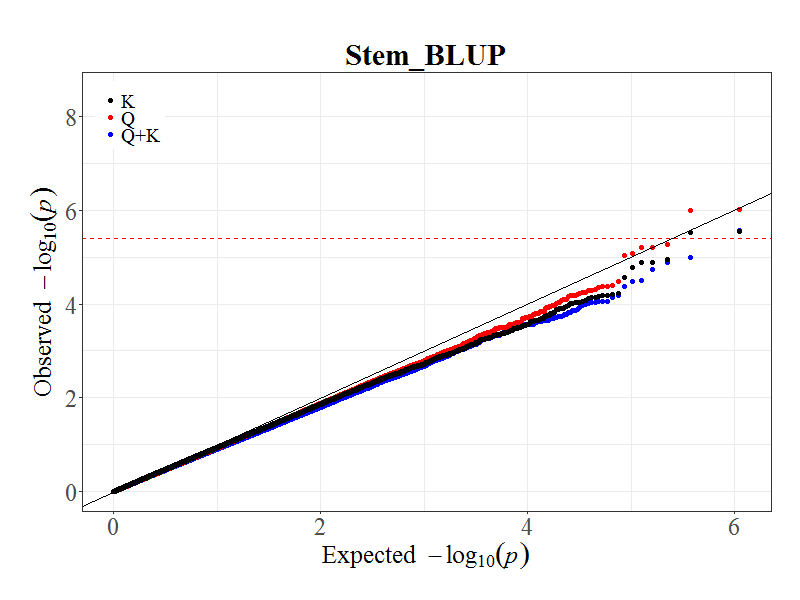
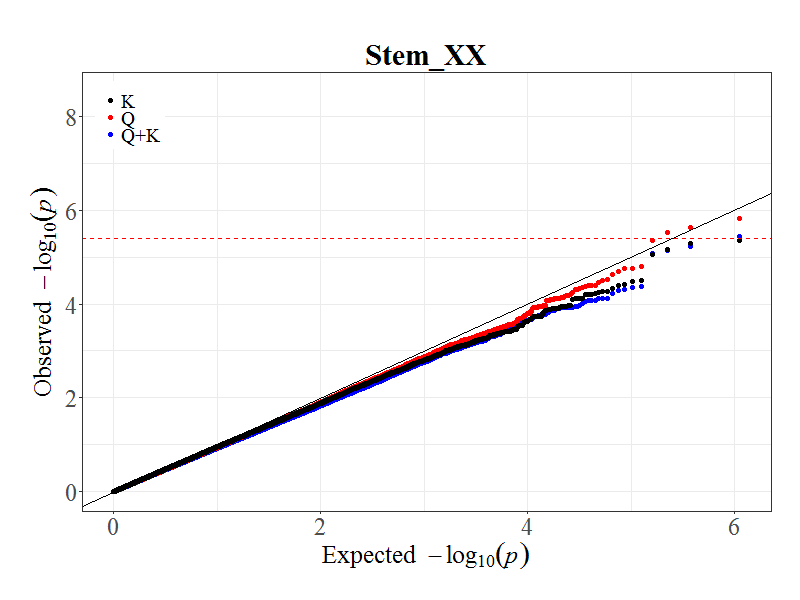


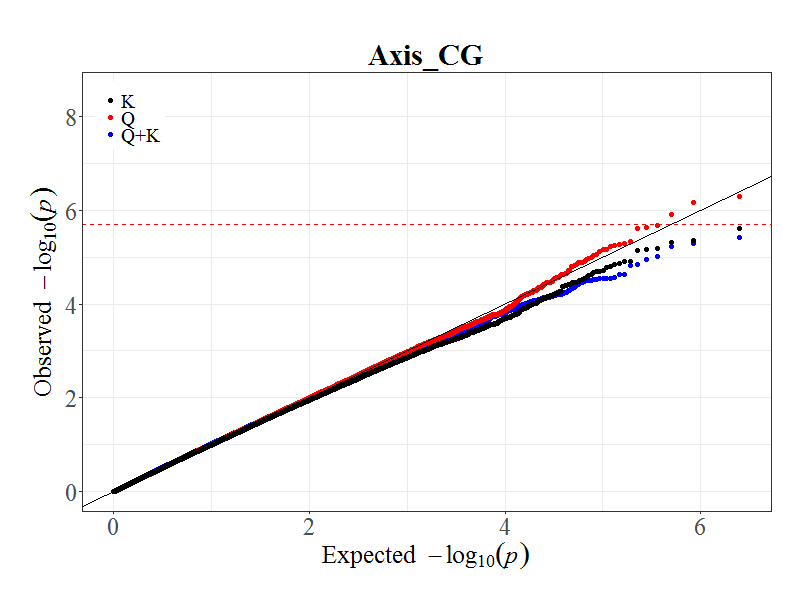
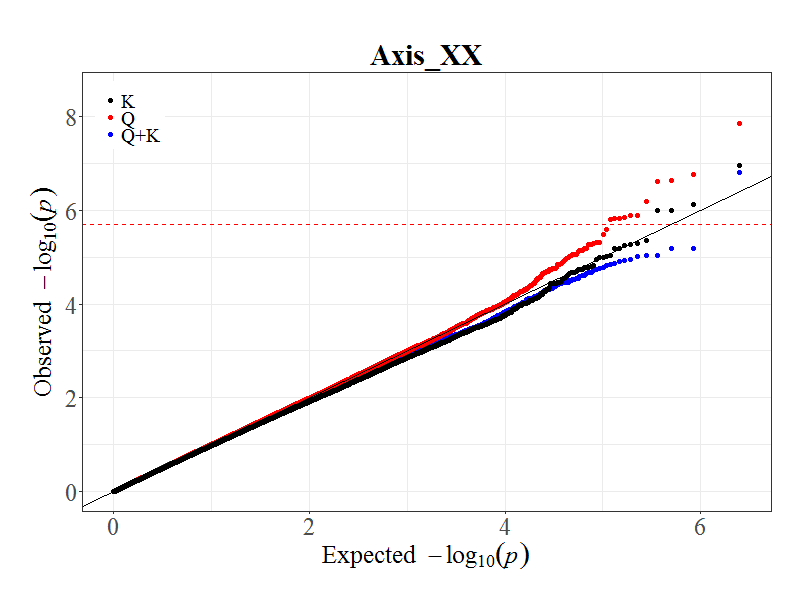
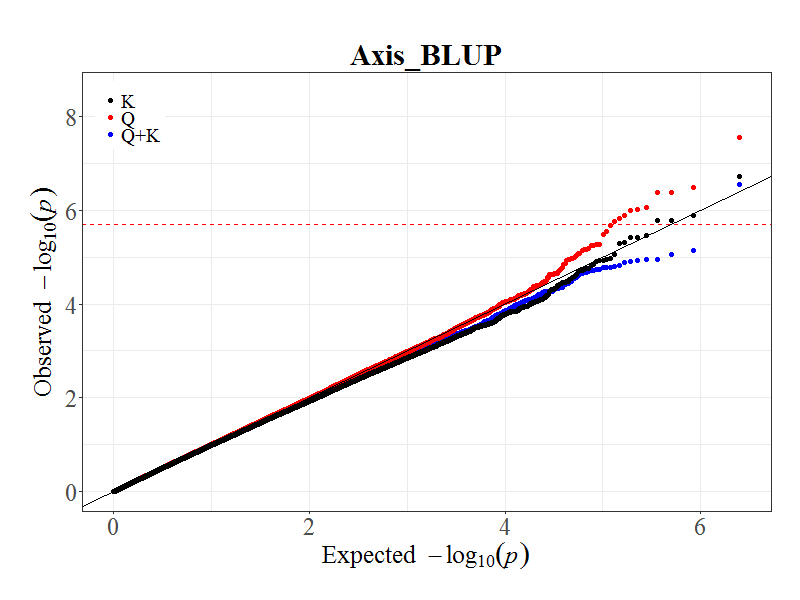
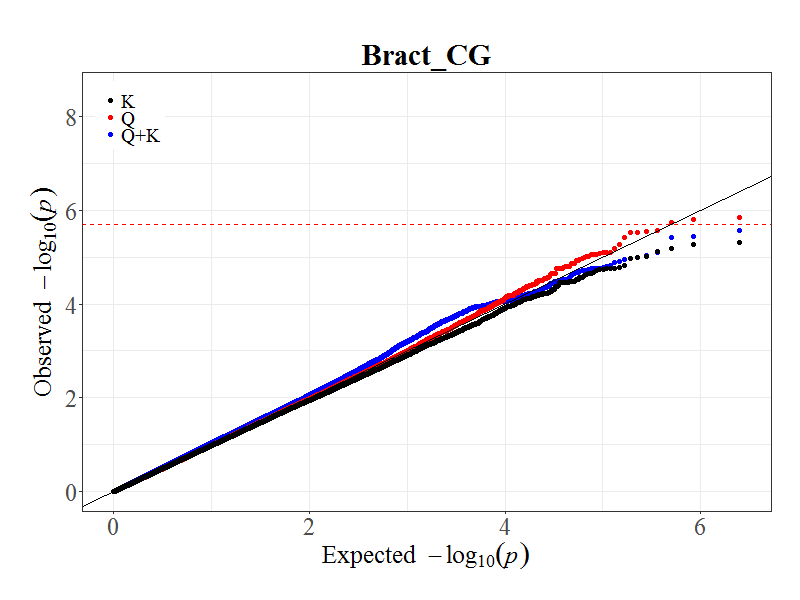
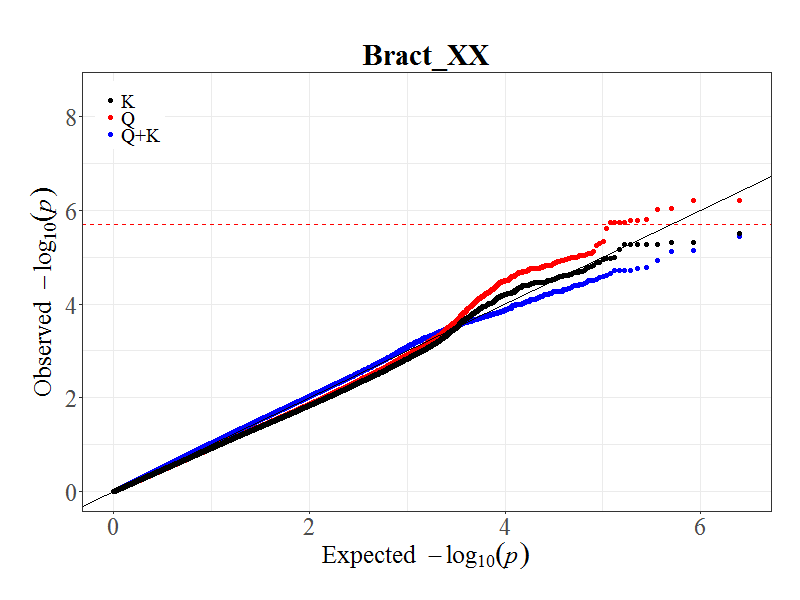
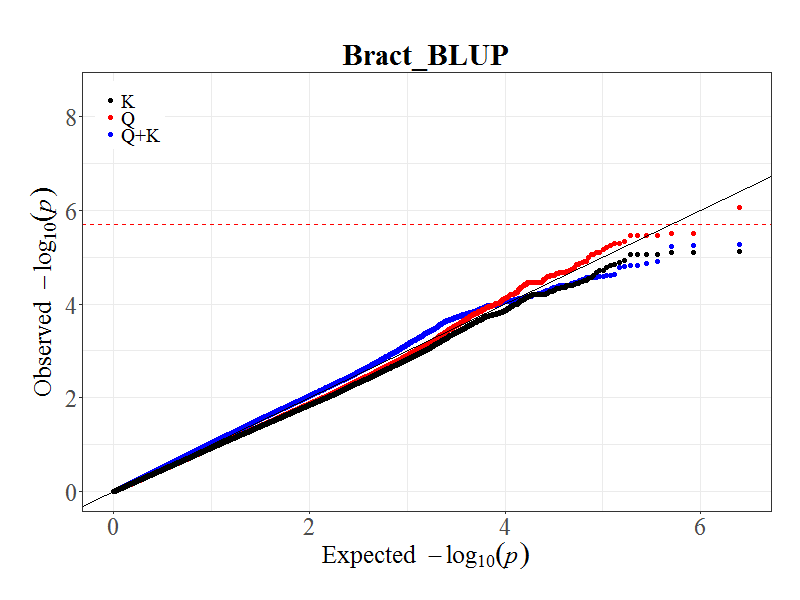
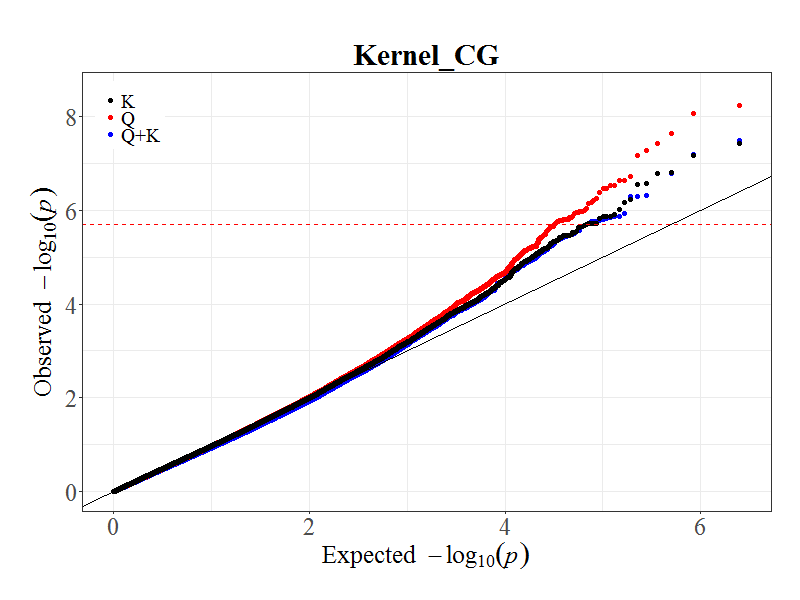
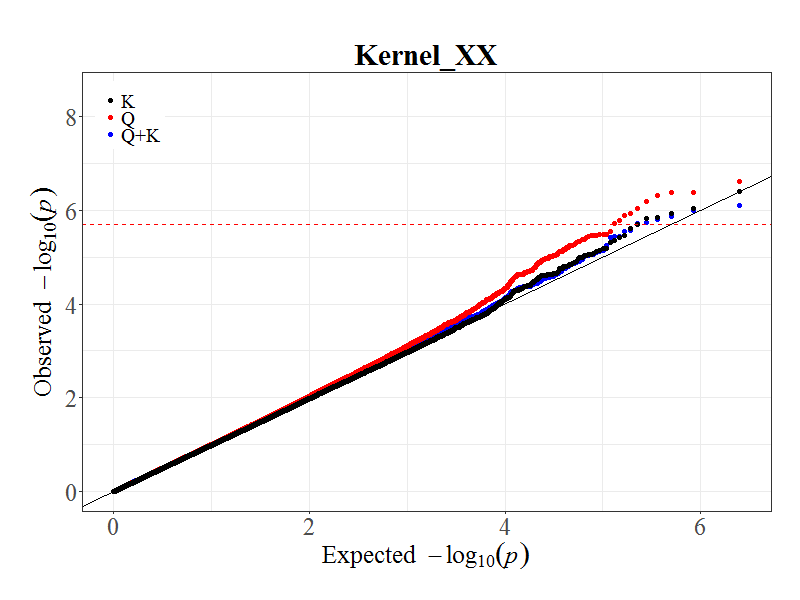
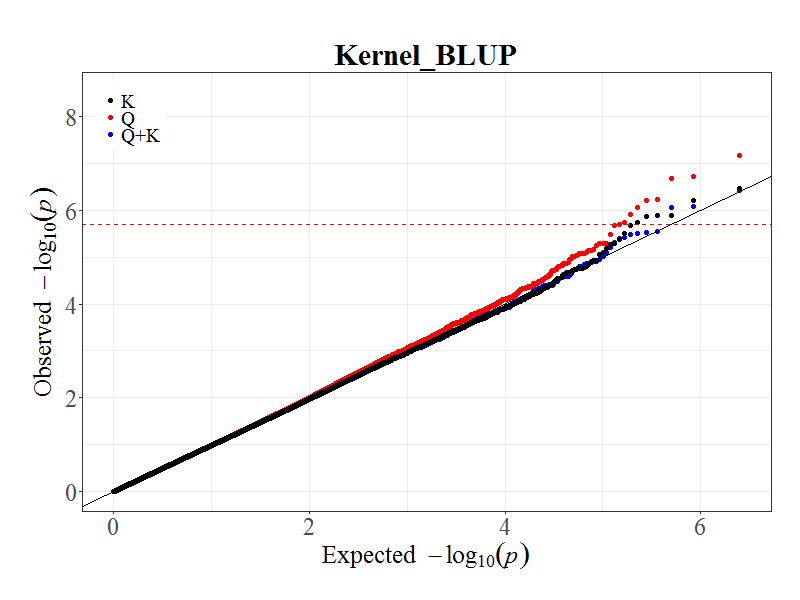
**Figure S1**. Comparison of Manhattan plots resulting from GWAS, based on 0.55M SNPs, using Q model and 5PCs+K model for mercury content in maize axis, stem, bract, leaf and kernel at BLUP environments.

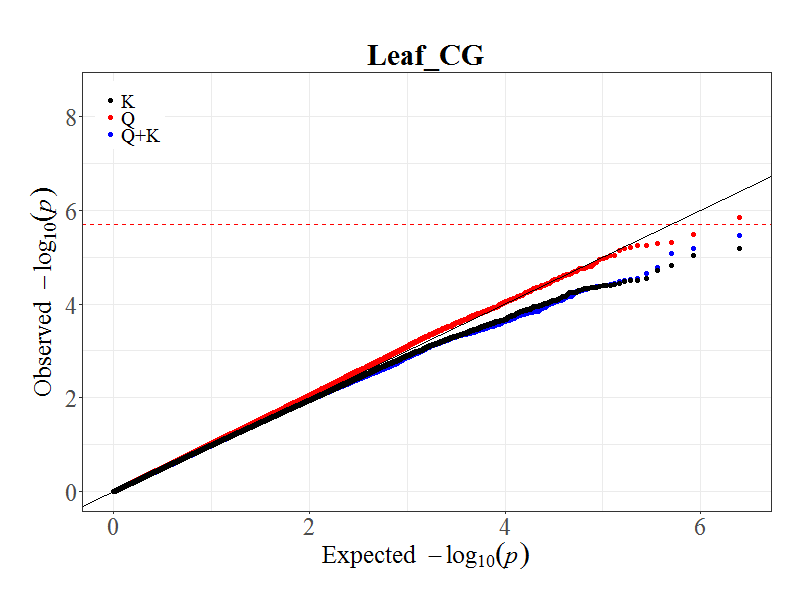


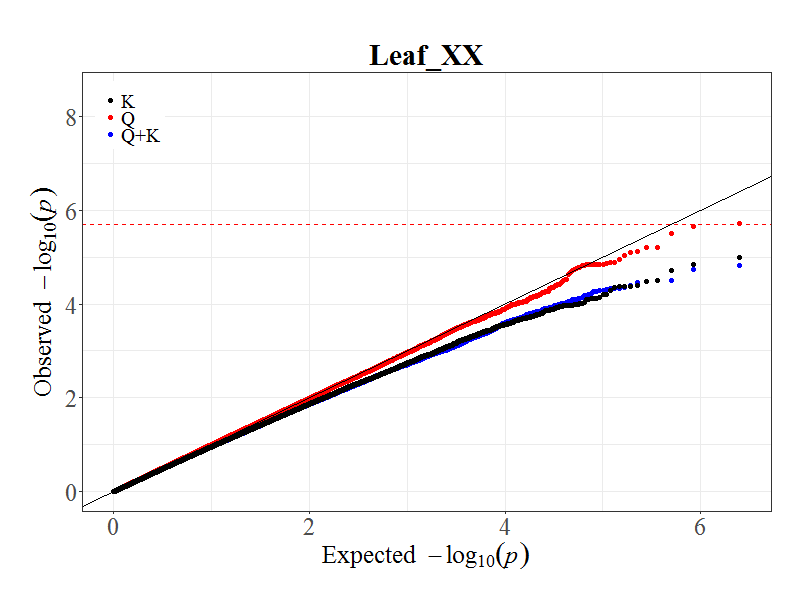
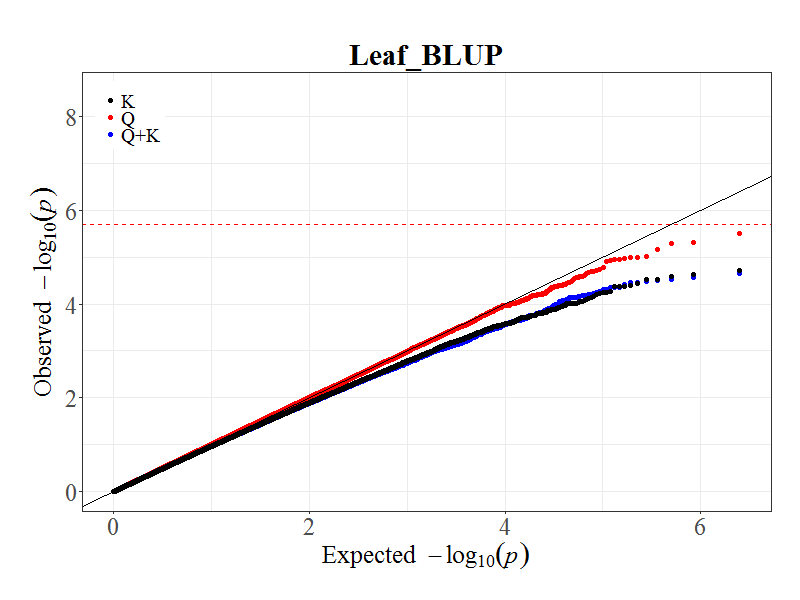


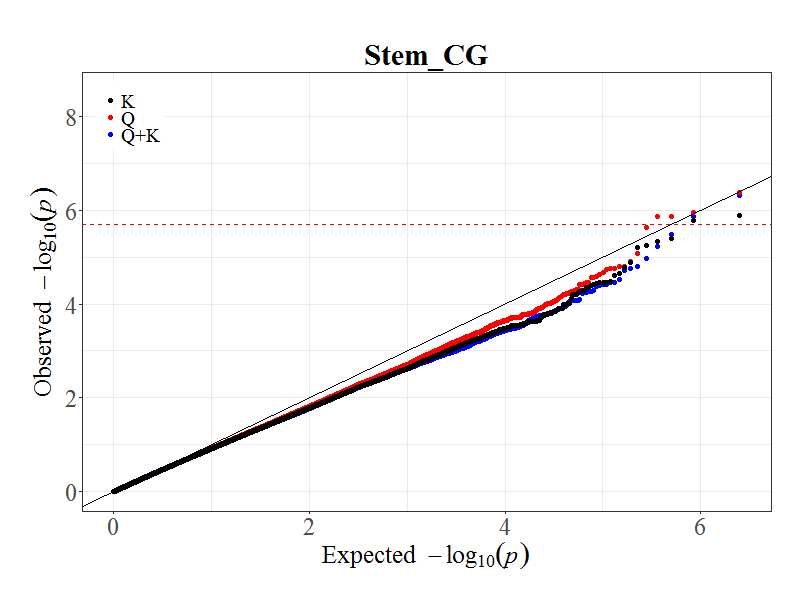
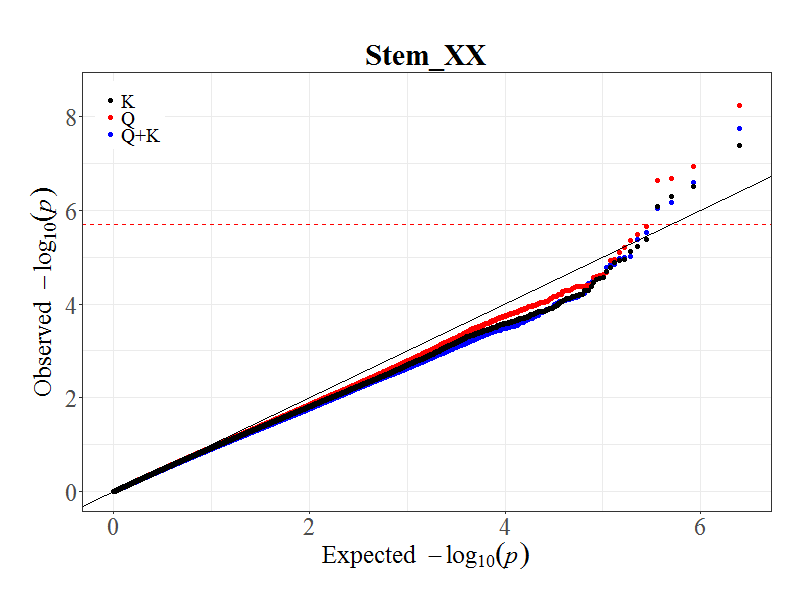


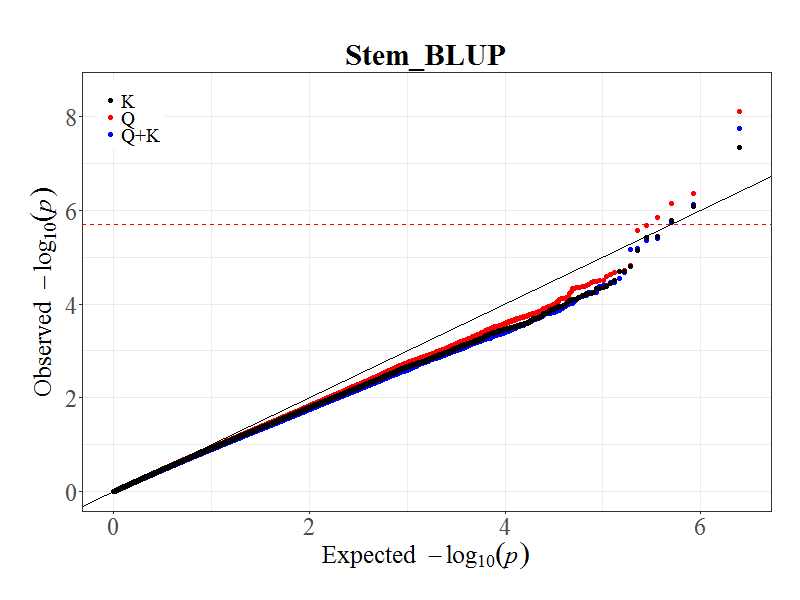
**Figure S2.** Comparison of Quantile-quantile (QQ) plots resulting from GWAS, based on 0.55M SNPs, using three models (Q, K and Q+K) for mercury content in maize axis, stem, bract, leaf, and kernel at three environments.



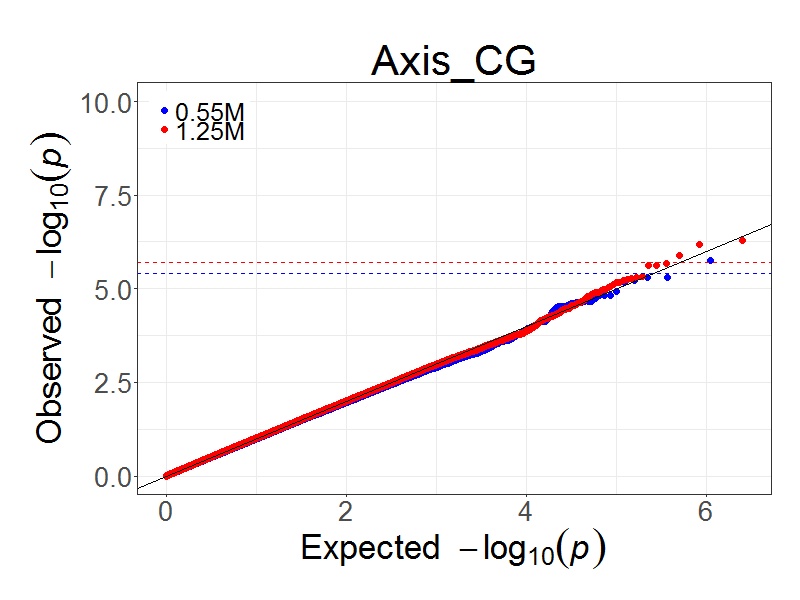
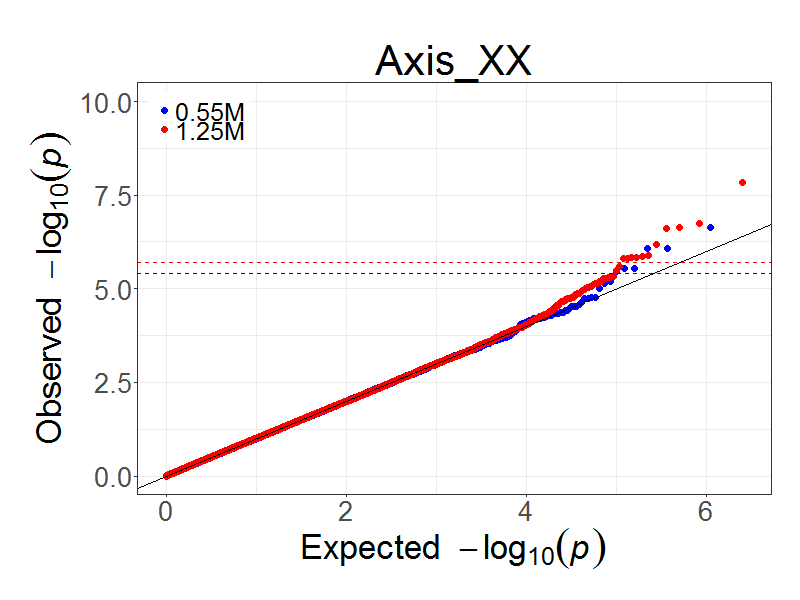
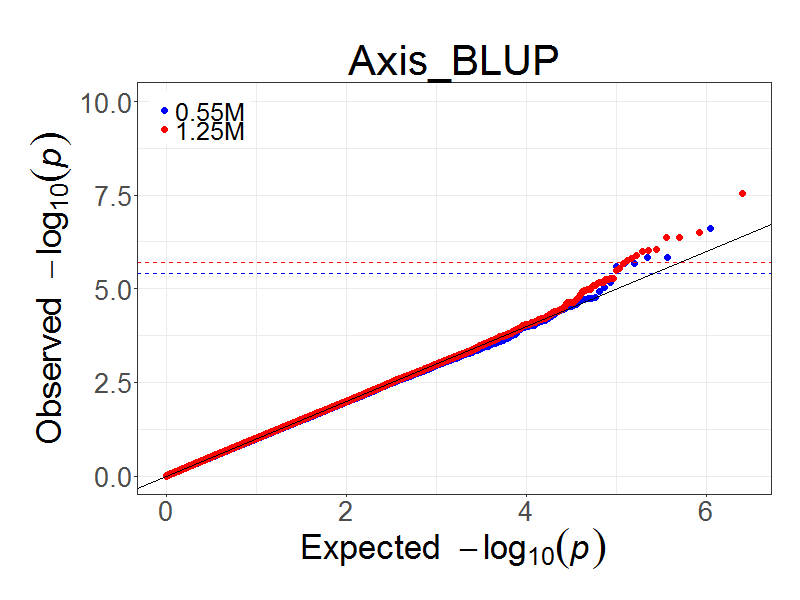
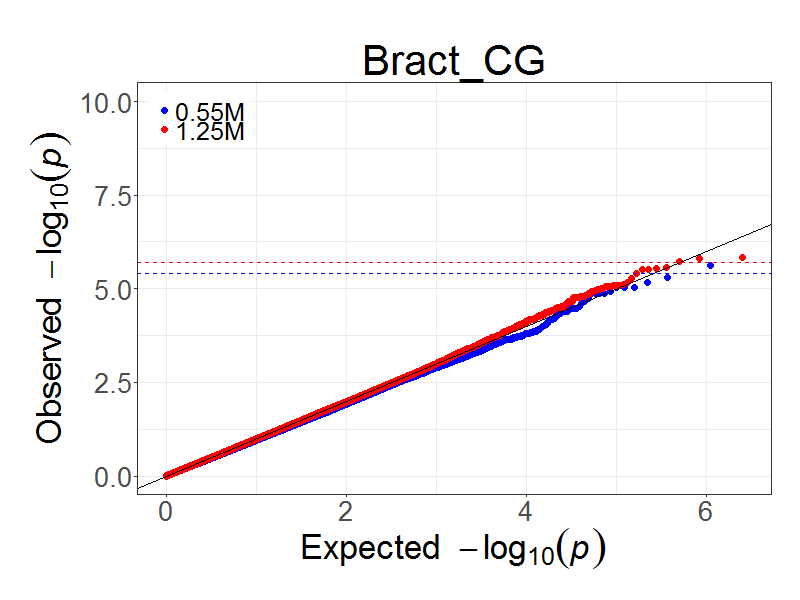
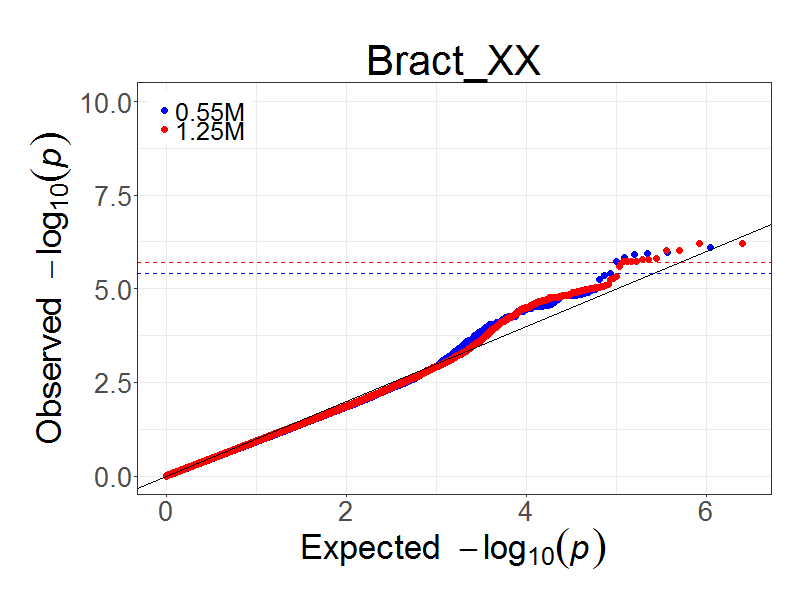
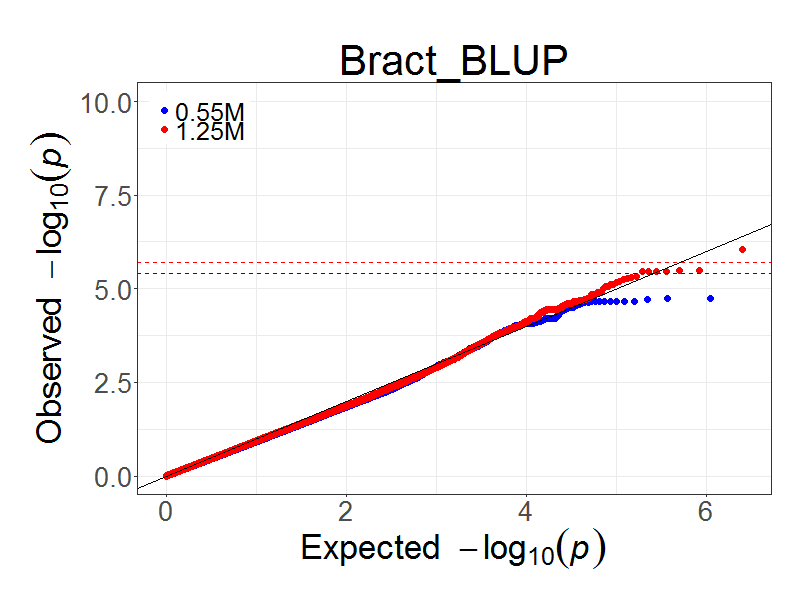
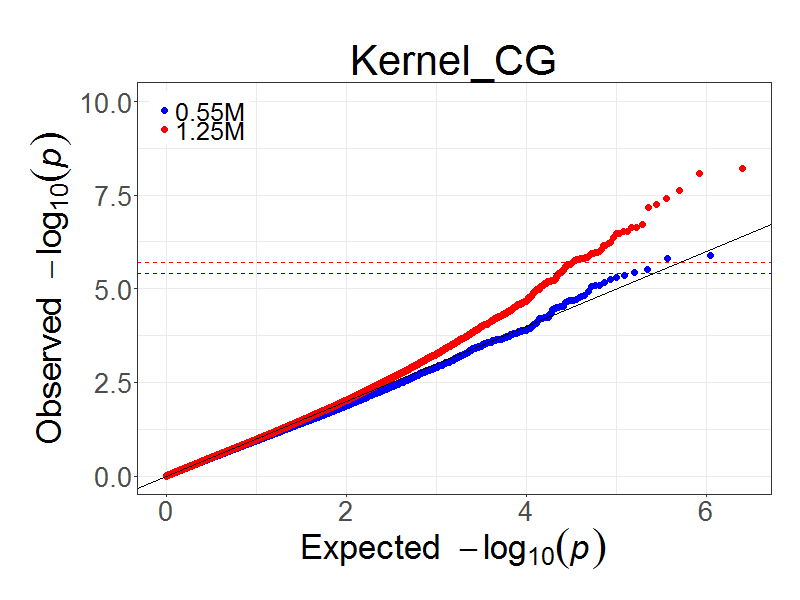
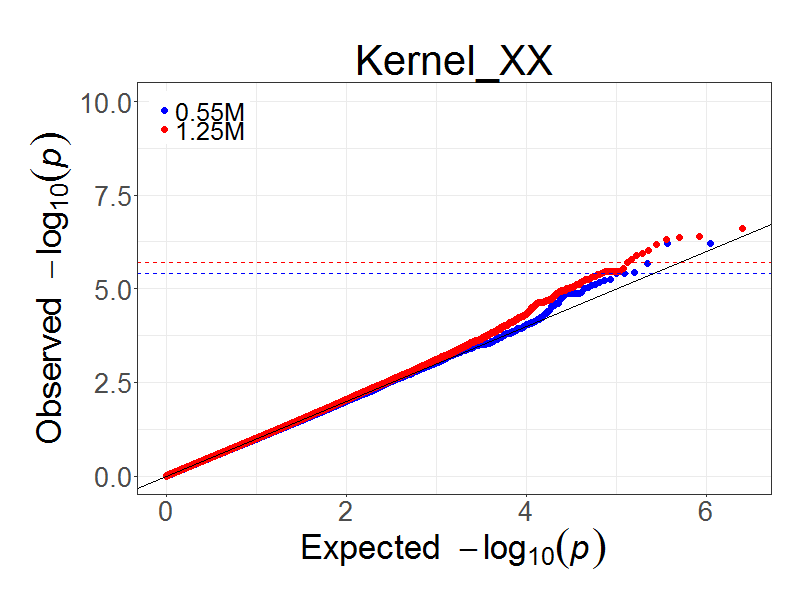
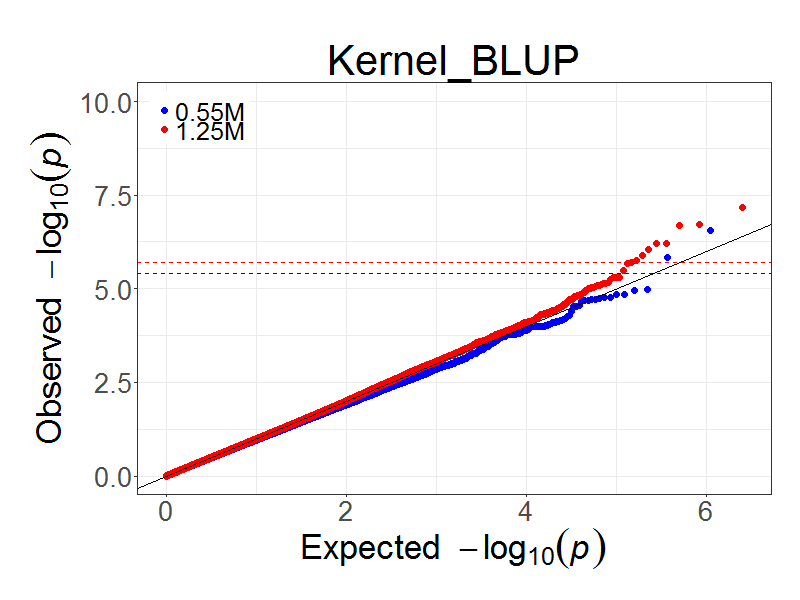
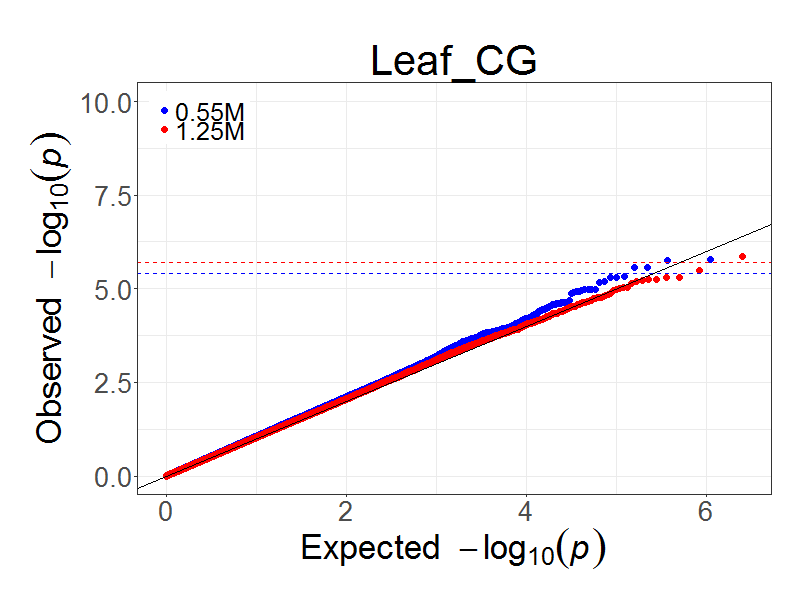


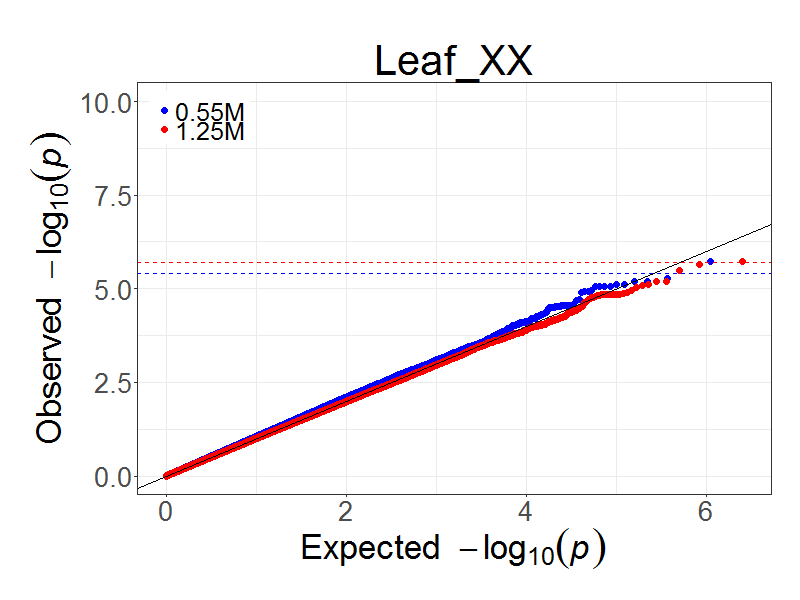
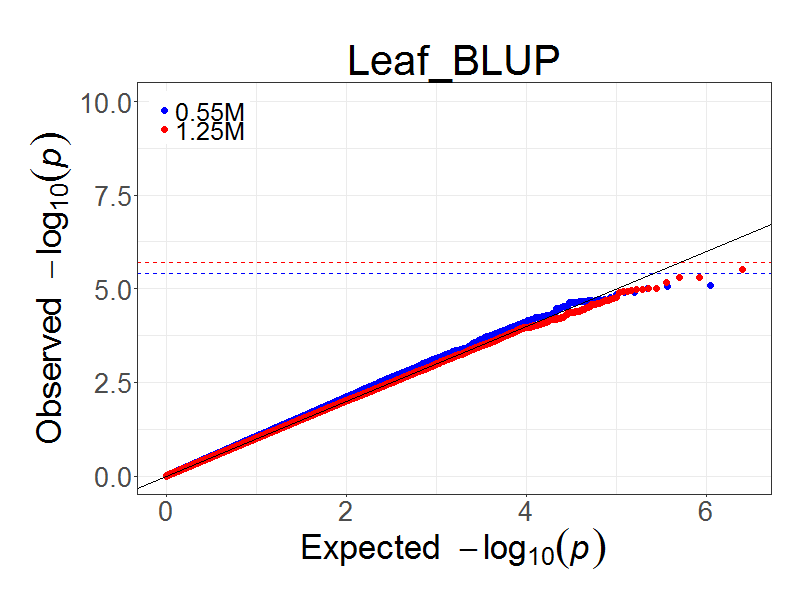


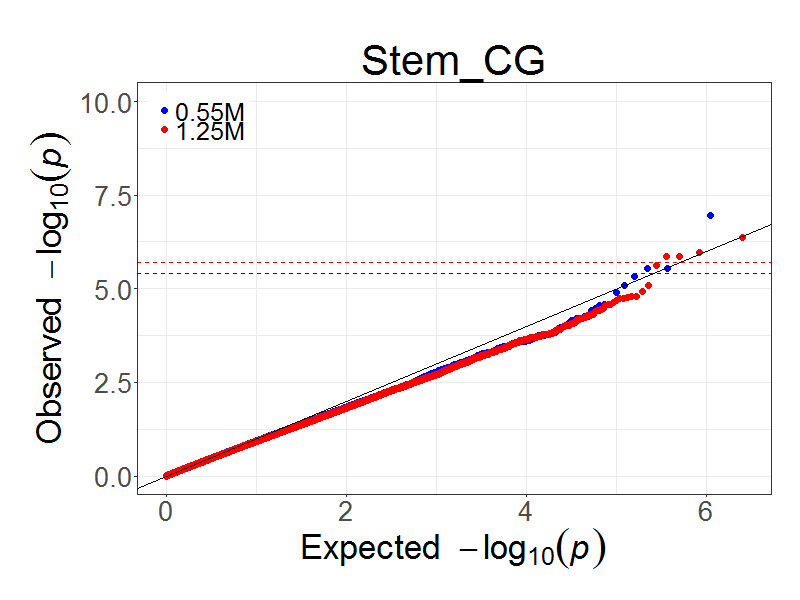
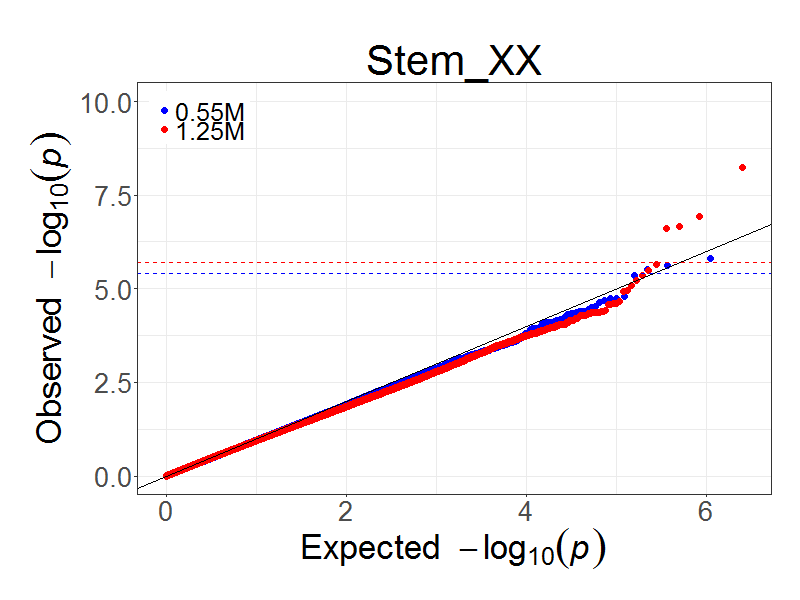


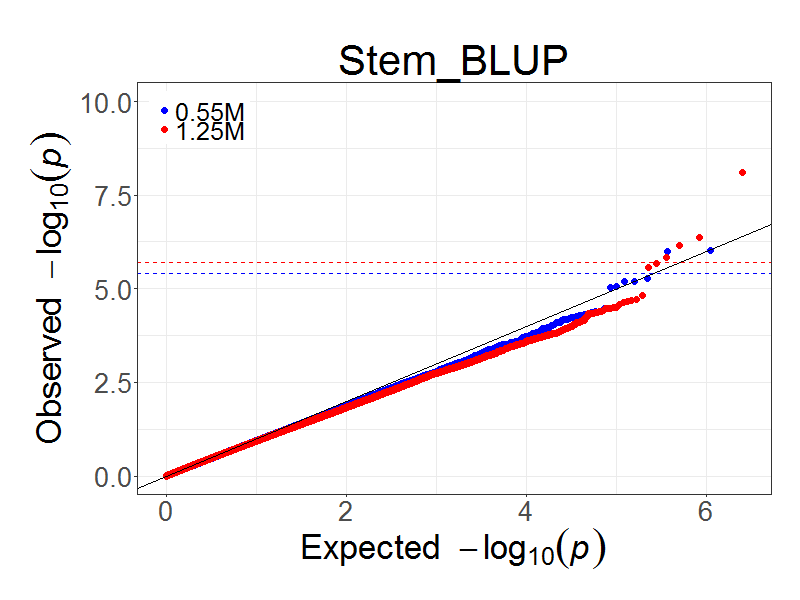


**Figure S3.** Comparison of quantile-quantile (QQ) plots resulting from GWAS, based on 1.25M SNPs, using three models (Q, K and Q+K) for mercury content in maize axis, stem, bract, leaf, and kernel at three environments.

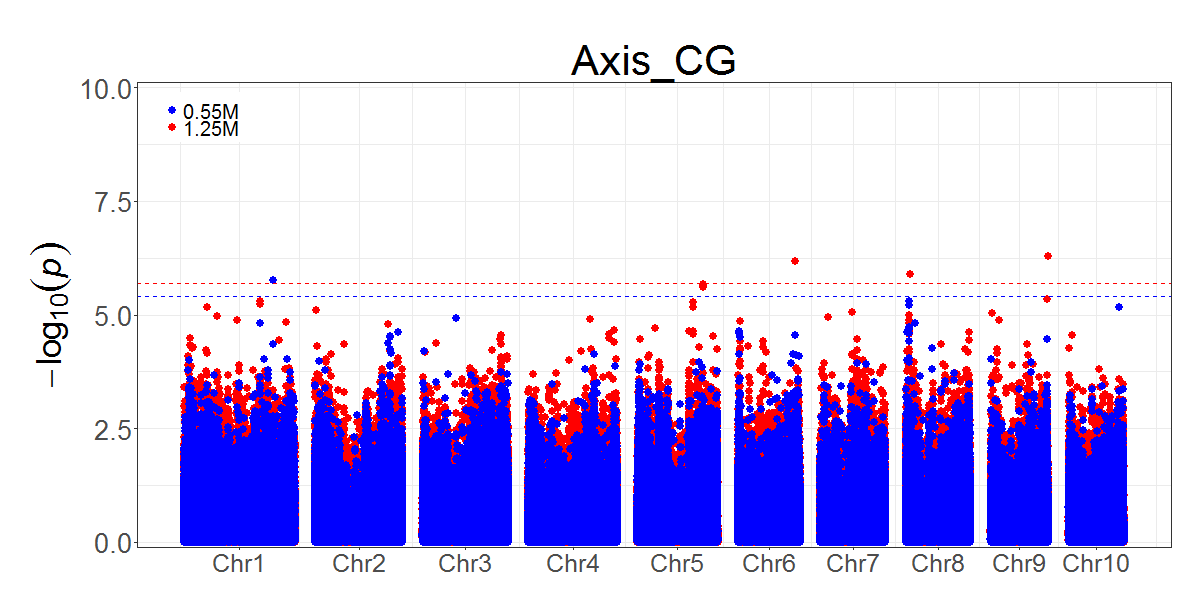
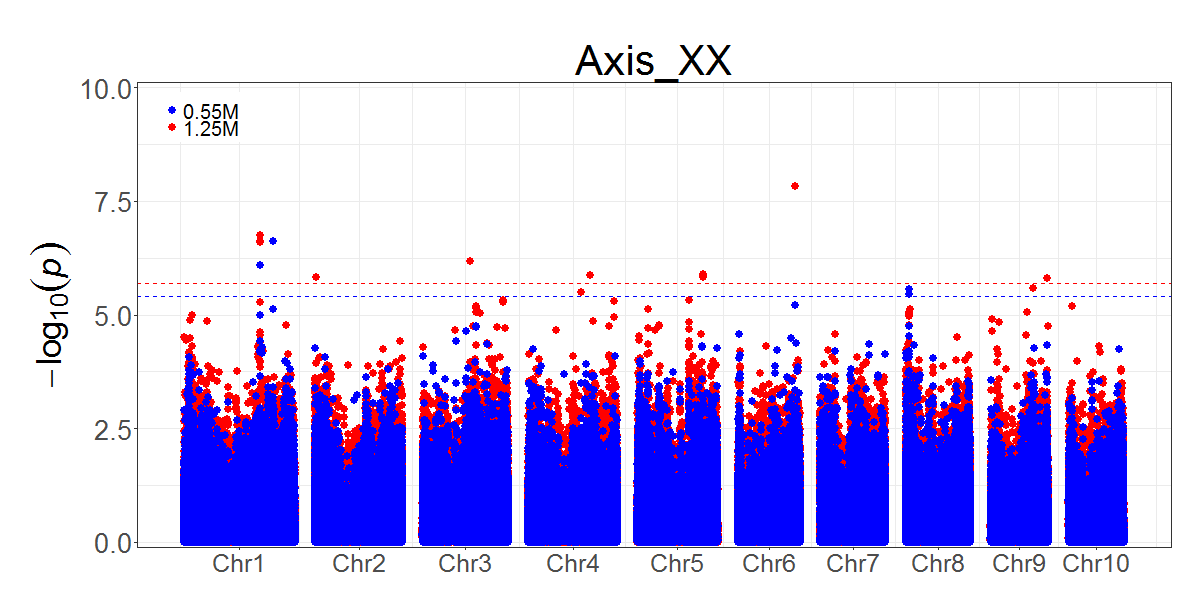


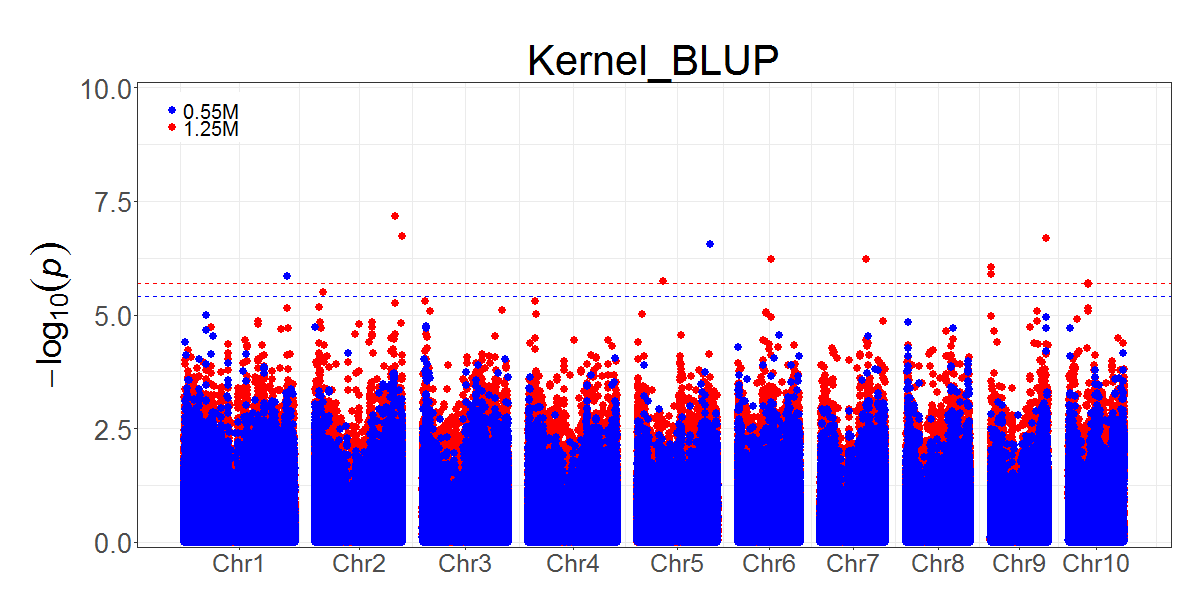
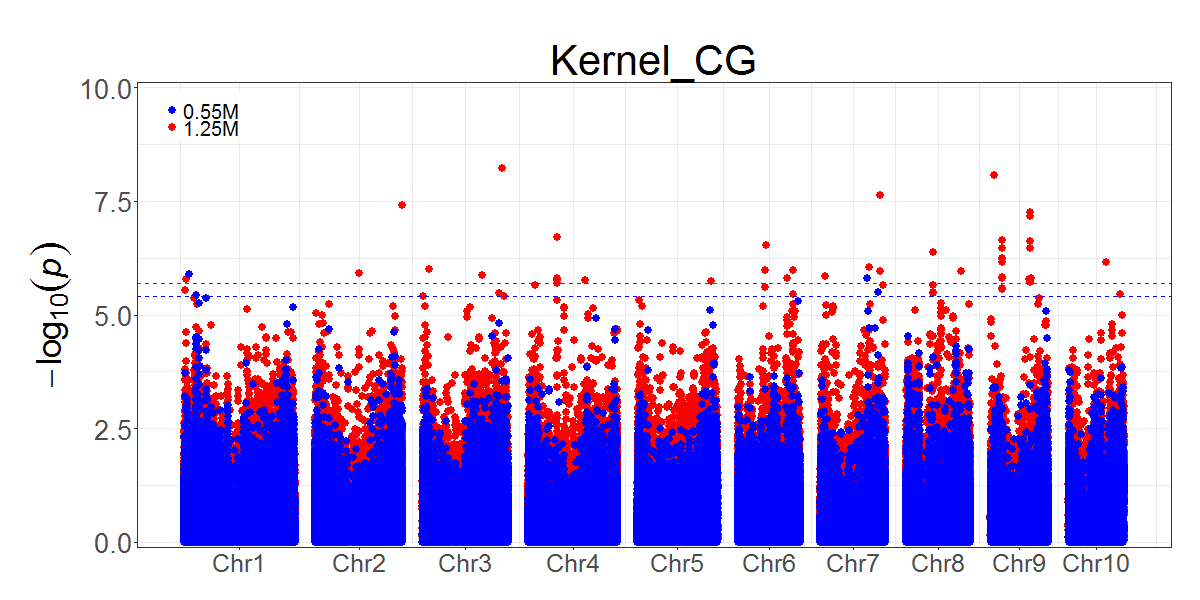
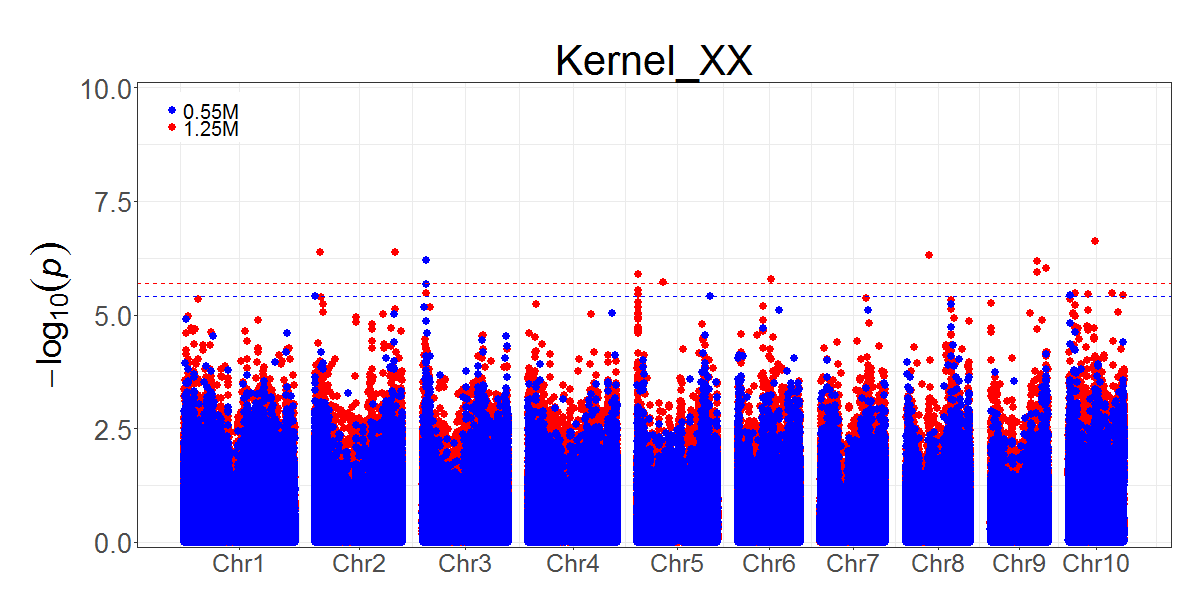
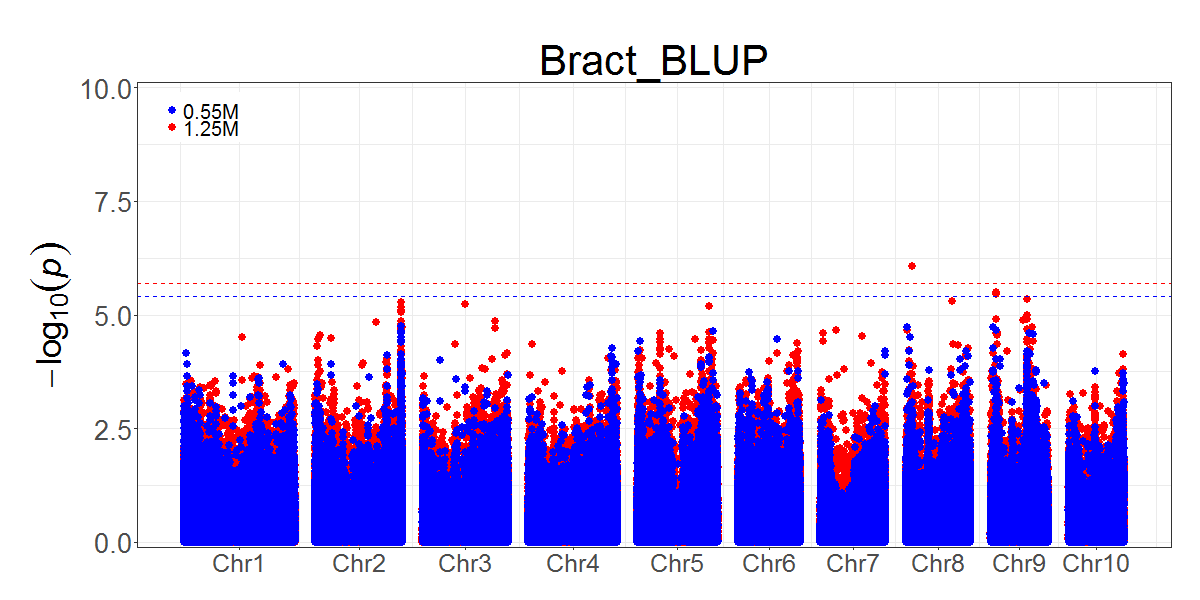
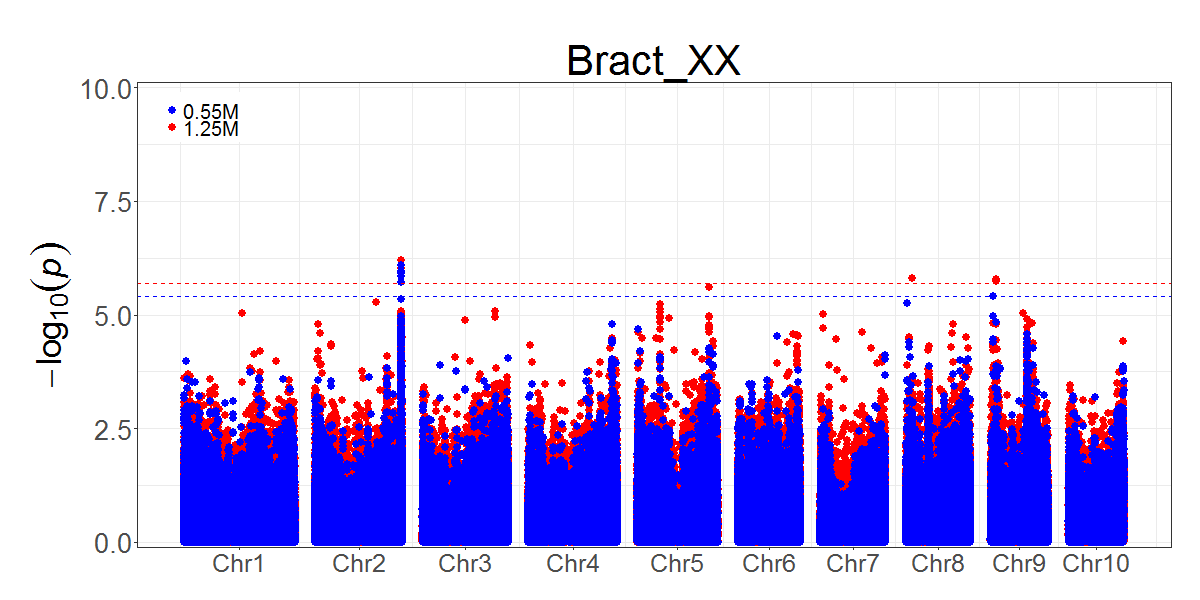
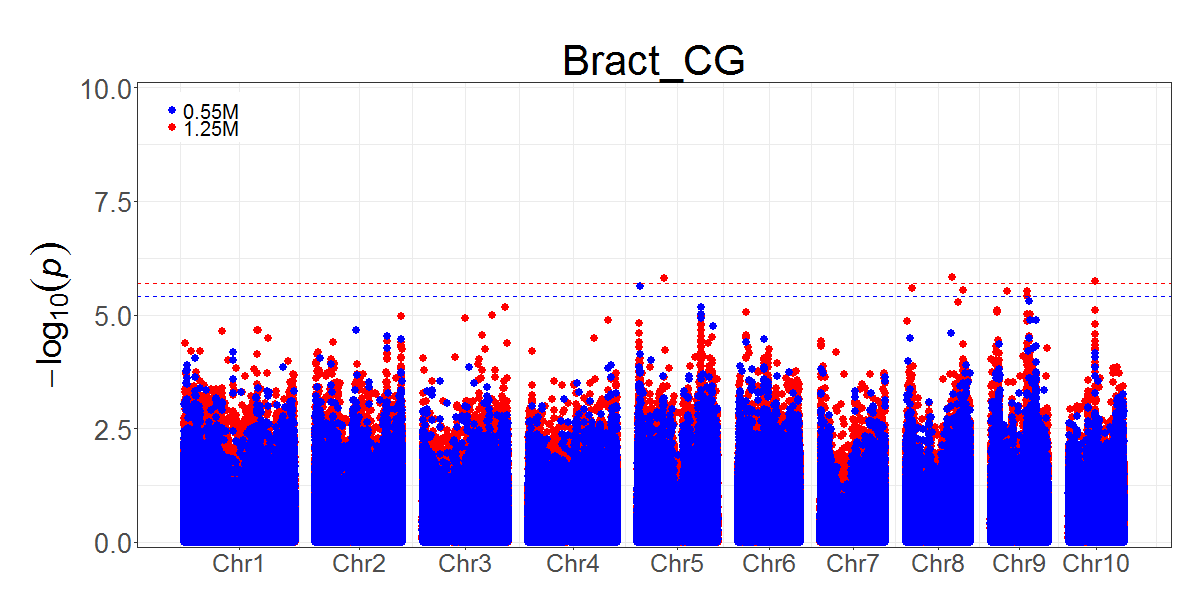
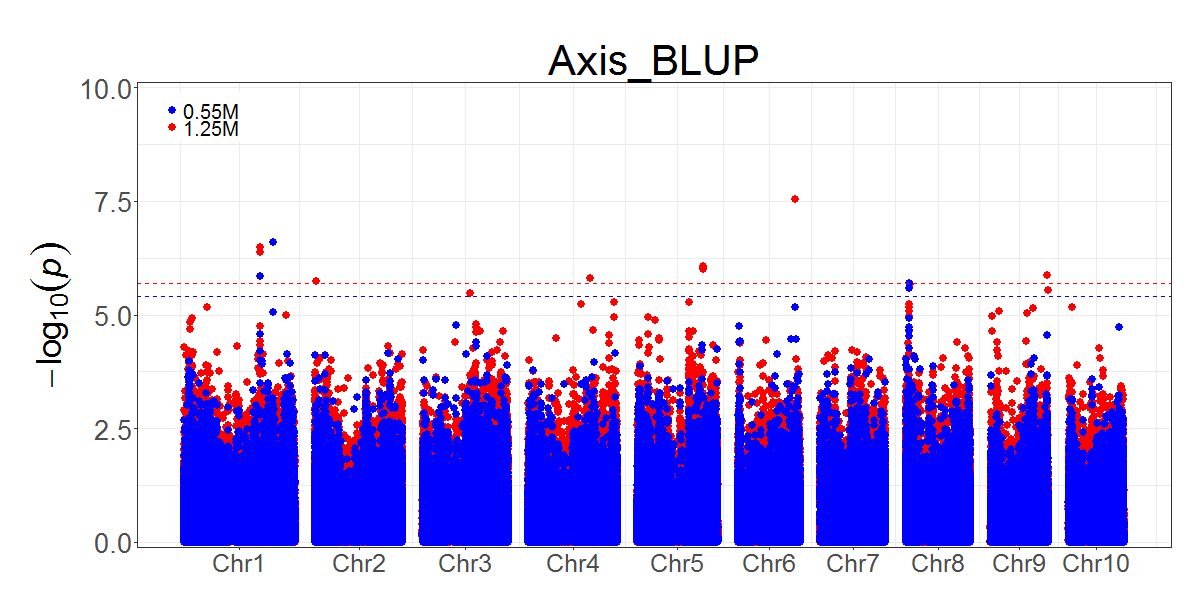
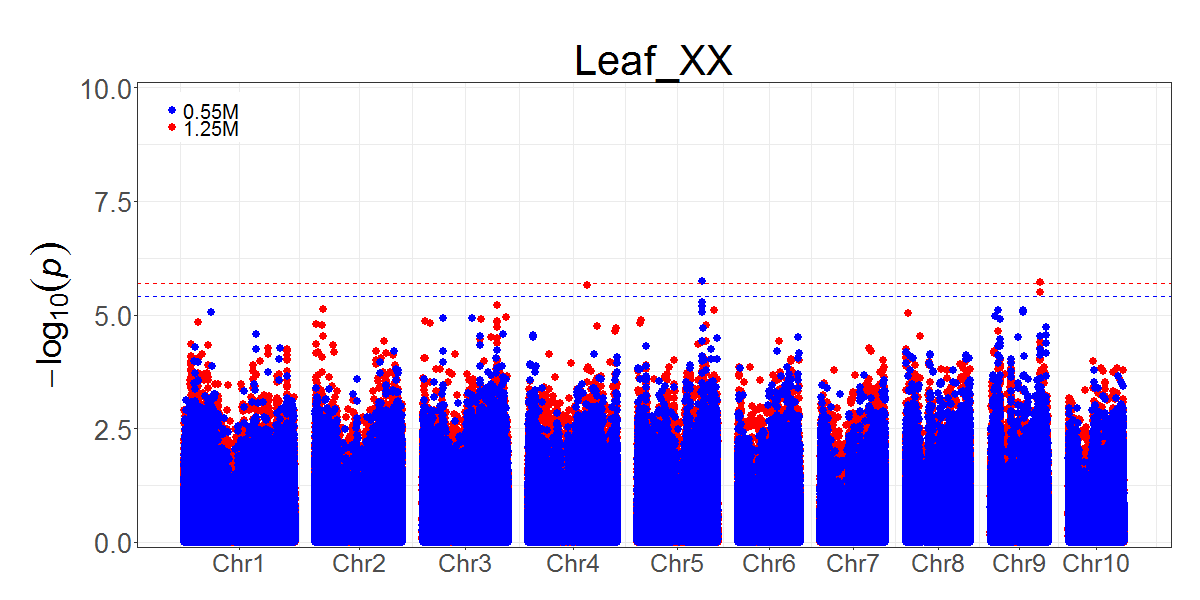
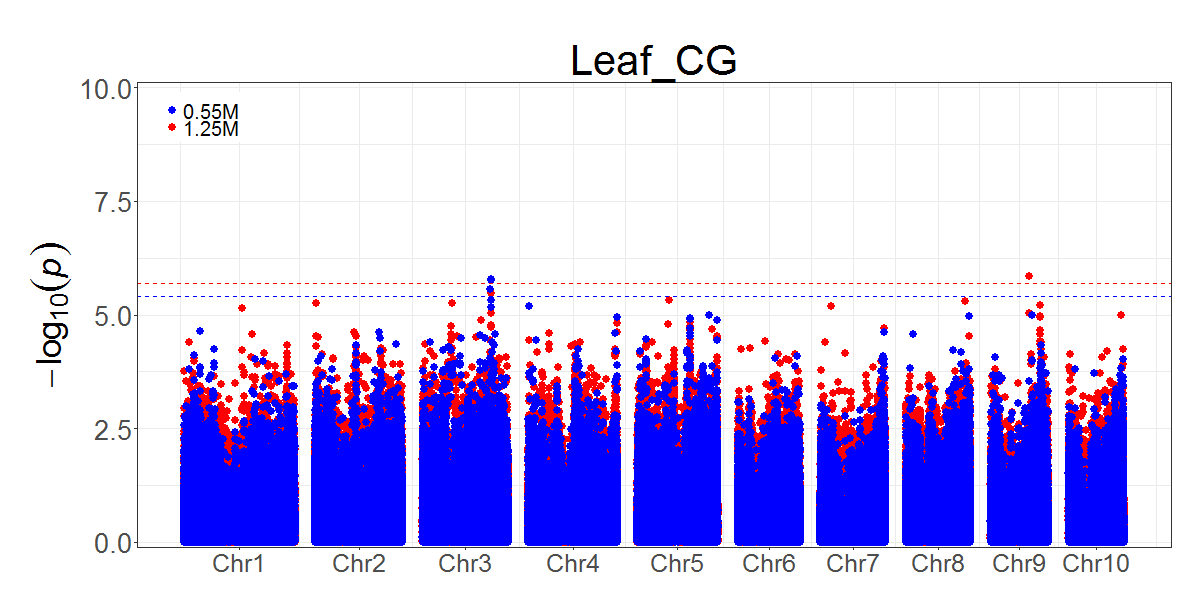
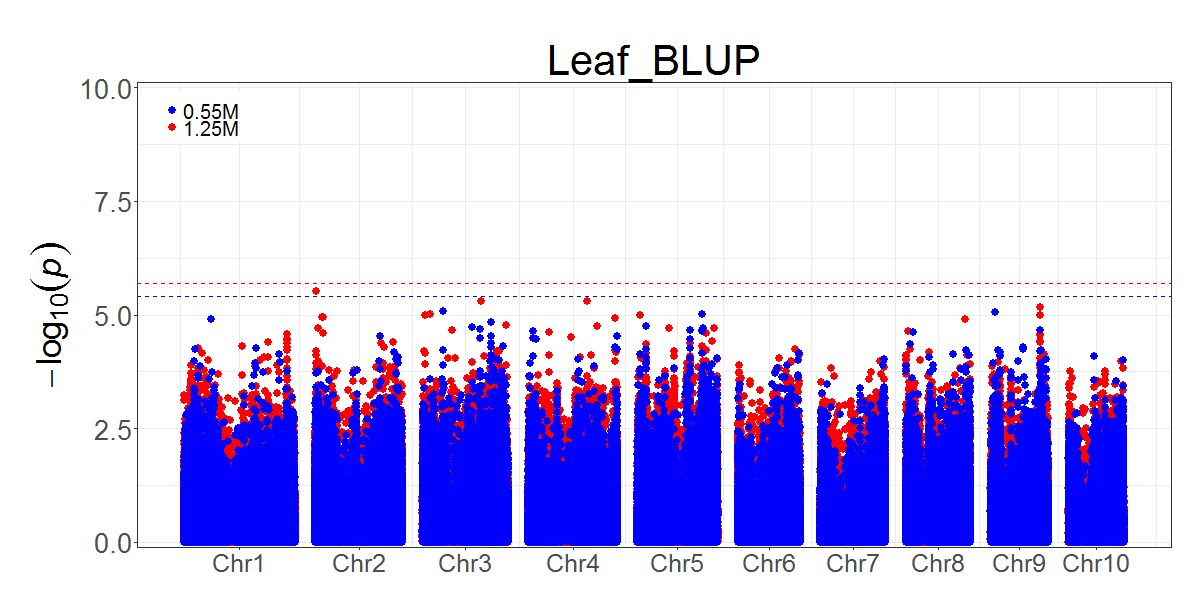


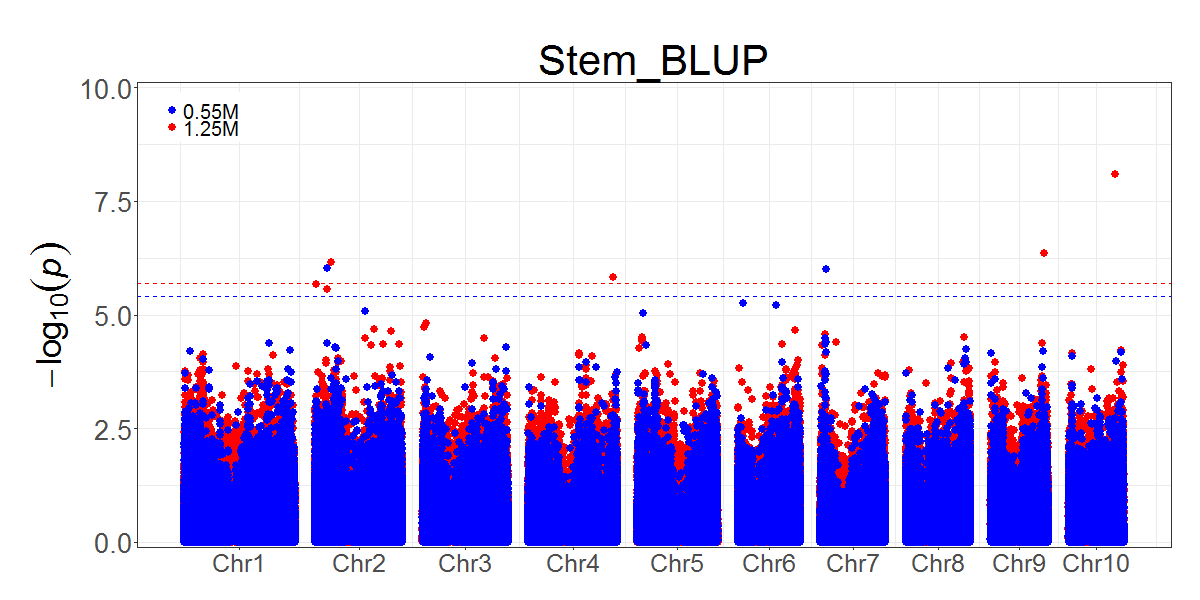
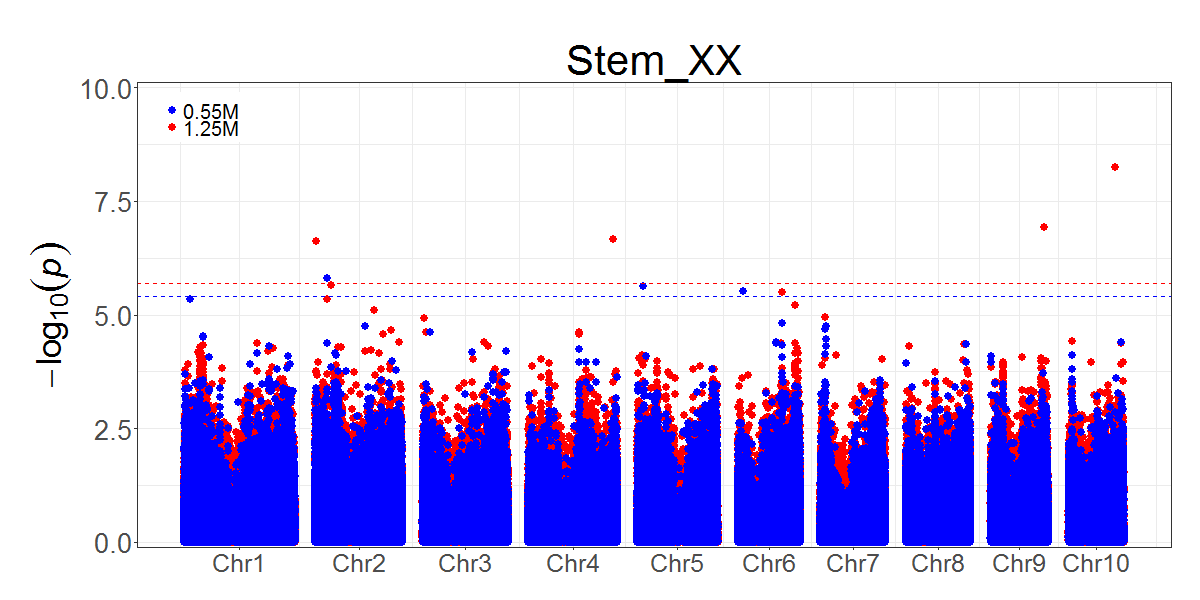
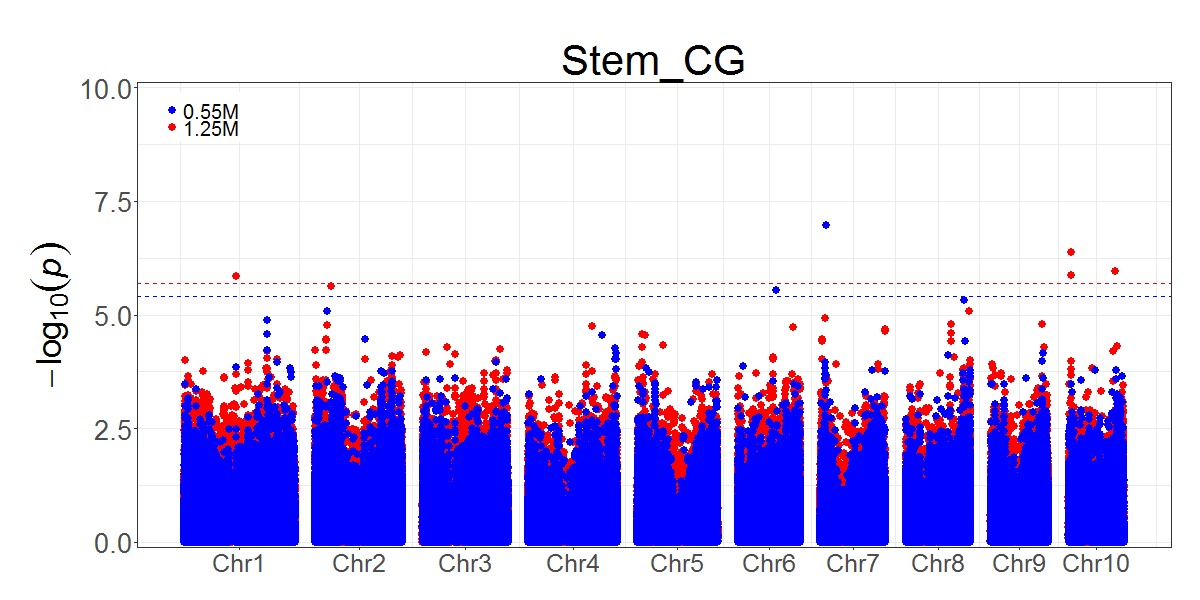


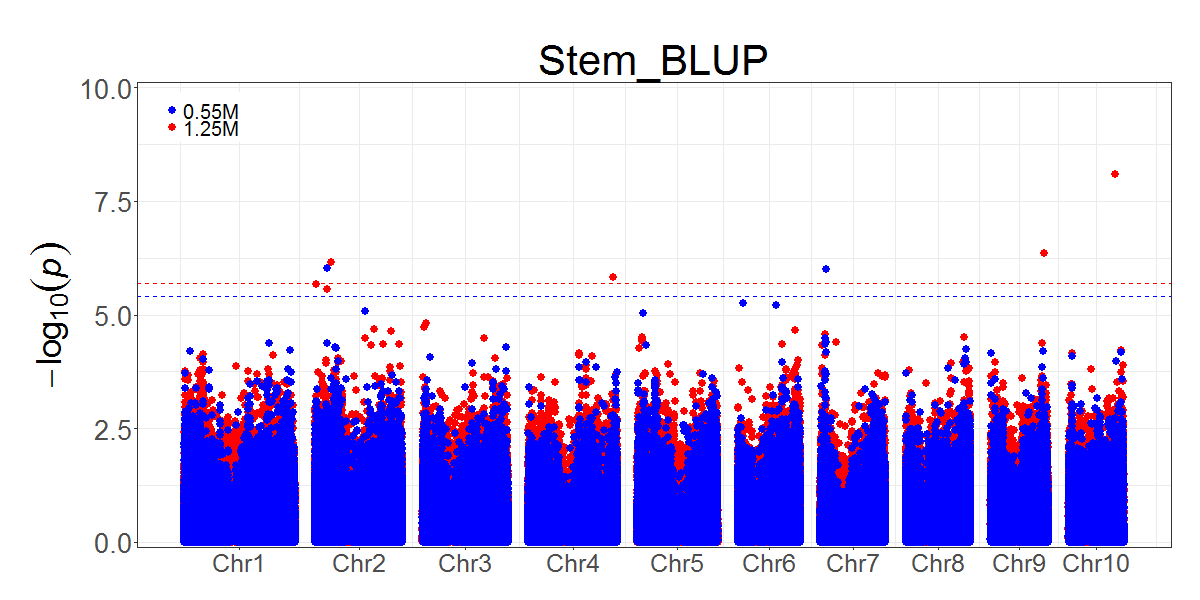


**Figure S4.** Comparison of Quantile-quantile (QQ) plots resulting from GWAS, based on 0.55M SNPs and 1.25M SNPs, using Q model for mercury content in maize axis, stem, bract, leaf, and kernel at three environments.









**Figure S5**. Comparison of Manhattan plots resulting from GWAS, based on 0.55M SNPs and 1.25M SNPs, using Q model for mercury content in maize axis, stem, bract, leaf, and kernel at three environments.