

Figure S1. Evaluation of linear mixed models (LMMs) including dominant effect terms. (A) Box and whisker plots of genomic inflation factors ( $\lambda_{GC}$ ) for *p* values. Red horizontal line indicates the theoretically expected value (i.e.,  $\lambda_{GC} = 1$ ). (B) Bar plots of power to detect quantitative trait loci (QTLs) in simulated phenotypes, assuming multiple environments and multiple trials. Recall values were calculated using a false discovery rate of 0.05 as the genome-wide significance threshold. Values represent means of 100 simulations. The fixed and random effect terms used in this analysis was GGE-type Q × E and ' $u_G + u_{GE} + u_{GT} + d_D + d_{DE} + d_{DT}$ ,' respectively.