

S3 Fig. Quantile-Quantile plots for four cold tolerance traits measured at germination and at the reproductive stages. The *y*-axis is the observed number and magnitude of observed *p*-value (-10 log) displays associations between SNPs and cold tolerance and the *x*-axis is the expected *p*-value (-10 log) under the null hypothesis (there is no association between SNPs and cold tolerance). The  $\lambda$  (lambda) is the genomic inflation factor.