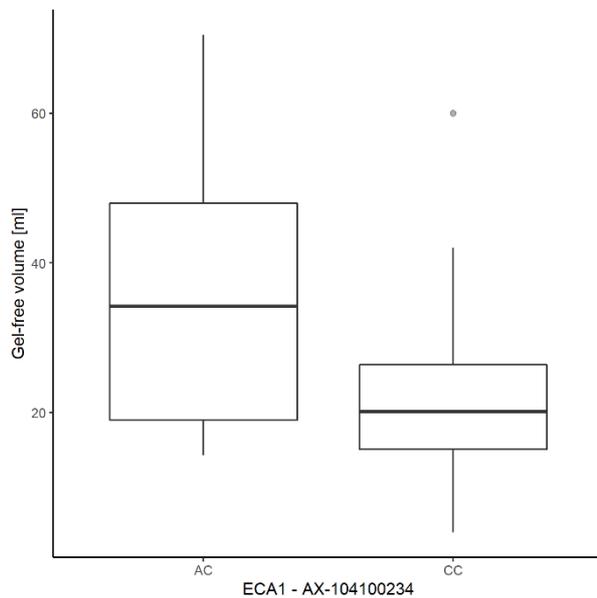
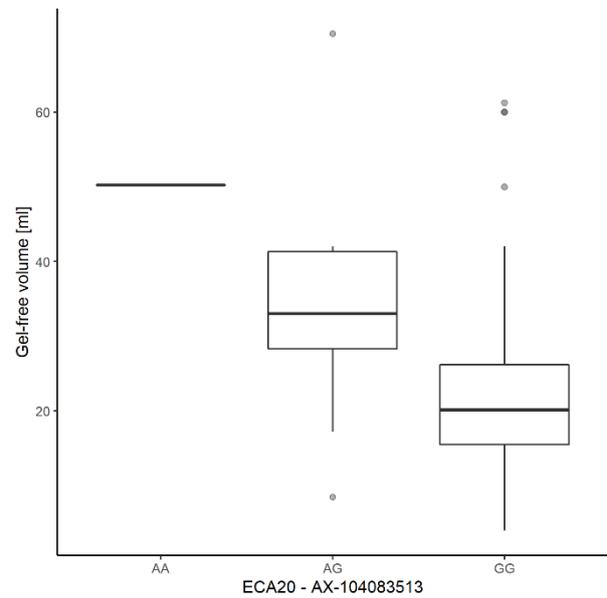


(a)



(b)



(c)

Figure S3. Genome-wide association for gel-free volume (VOL, $n=109$). (a) Manhattan plot (blue line representing the suggestive significance threshold ($p < 10^{-5}$) and red line) the Bonferroni-corrected significance threshold ($p < 4.56 \times 10^{-7}$). The inset on the right hand corner shows the quantile-quantile (Q-Q) plot with the observed p -value plotted against the expected one. (b,c) boxplots representing the genotype effect of the best associated SNP on ECA1 (b) and ECA20 (c) on the gel-free volume.