**Supplementary Information 6**

In order to investigate the effect of including SNPs with low minor allele frequency in the HD panels on the prediction accuracy, the cross validation analysis using HD SNP panels was repeated with a more stringent minor allele frequency threshold of 0.3. Removing SNPs with low minor allele frequency was not found to reduce the variability of prediction accuracy values obtained across the SNP panel replicates.

**Figure S6.** Genomic prediction accuracy after removing SNPs with minor allele frequency less than 0.3 (genotypes before imputation).

