



**Figure S16** Comparison of predicted genomic values of wheat lines for environment 1 obtained from the three models. Colors indicate different wheat clusters. Overall correlations of predicted values as well as correlations within each cluster are given. A) Comparison of across group GBLUP (A-GBLUP) and within group GBLUP (W-GBLUP); B) Comparison of A-GBLUP and multi group GBLUP (MG-GBLUP); C) Comparison of W-GBLUP and MG-GBLUP.