

FIGURE LEGENDS

Figure 1. Eigenvector principal component plot (A) and its 3D demonstration (B)

Figure 2. Kinship plot of panel. The heat map of the kinship matrix demonstrates the relationship between genotypes

Figure 3. LD decay plot using the physical position of SNP markers at an r^2 value of 0.1. LD decay drop point was 3,601,053 bp in the whole durum wheat genome

Figure 4. Manhattan and QQ plots of GWAS analyses. Markers that exceeded the *FDR-adjusted p*-values are marker-trait associations (MTAs). Stable MTAs are indicated by vertical lines connecting overlapping markers. Marker names are illustrated in the plots.

Figure S1. Distribution plots of grain size and shape-related traits of the durum panel in two environments and BLUP data

Figure S2. Created LD blocks for stable MTAs. The markers and blocks for each MTA (some located on the same marker) are shown in yellow. The MTAs are also shown on their own markers.