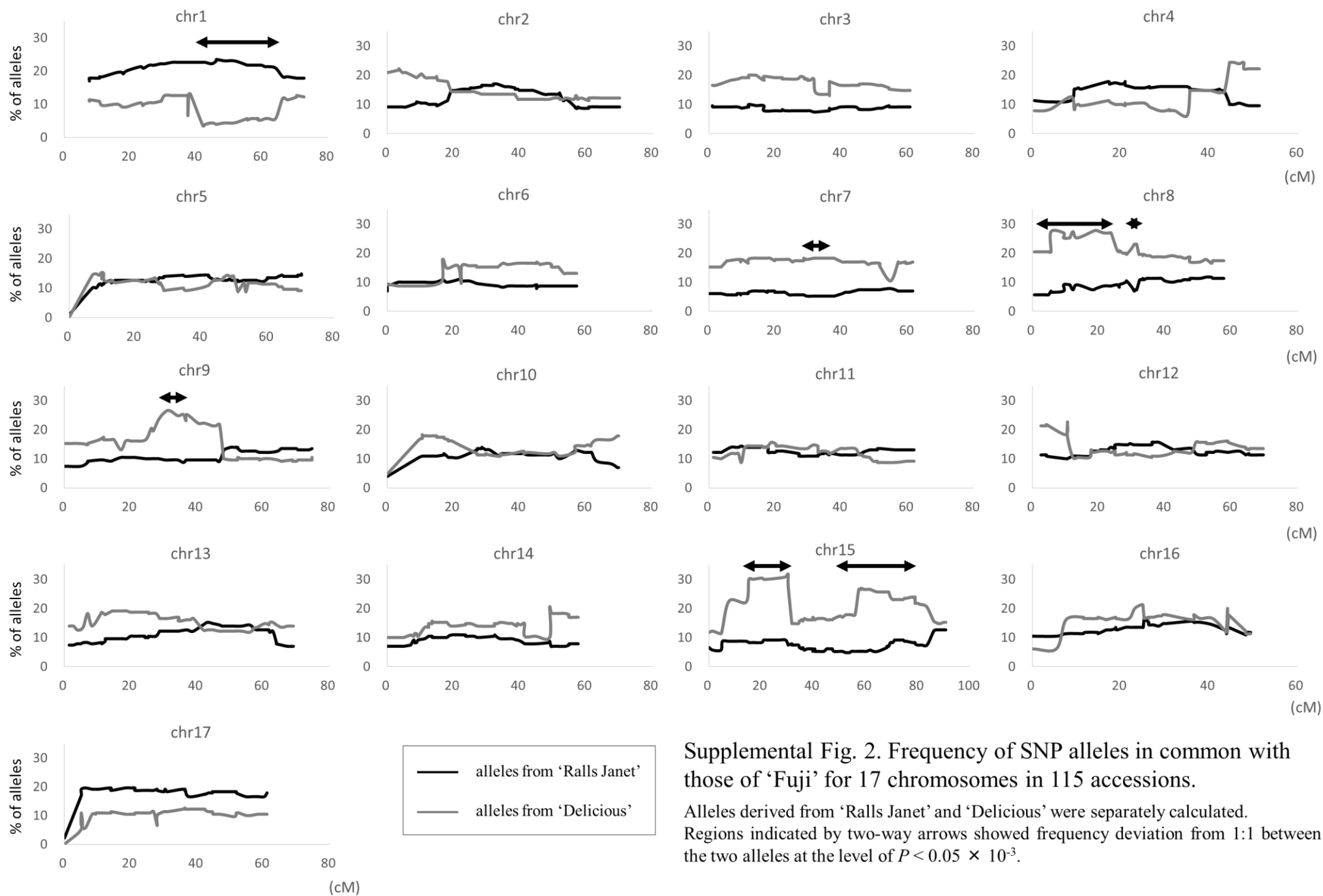


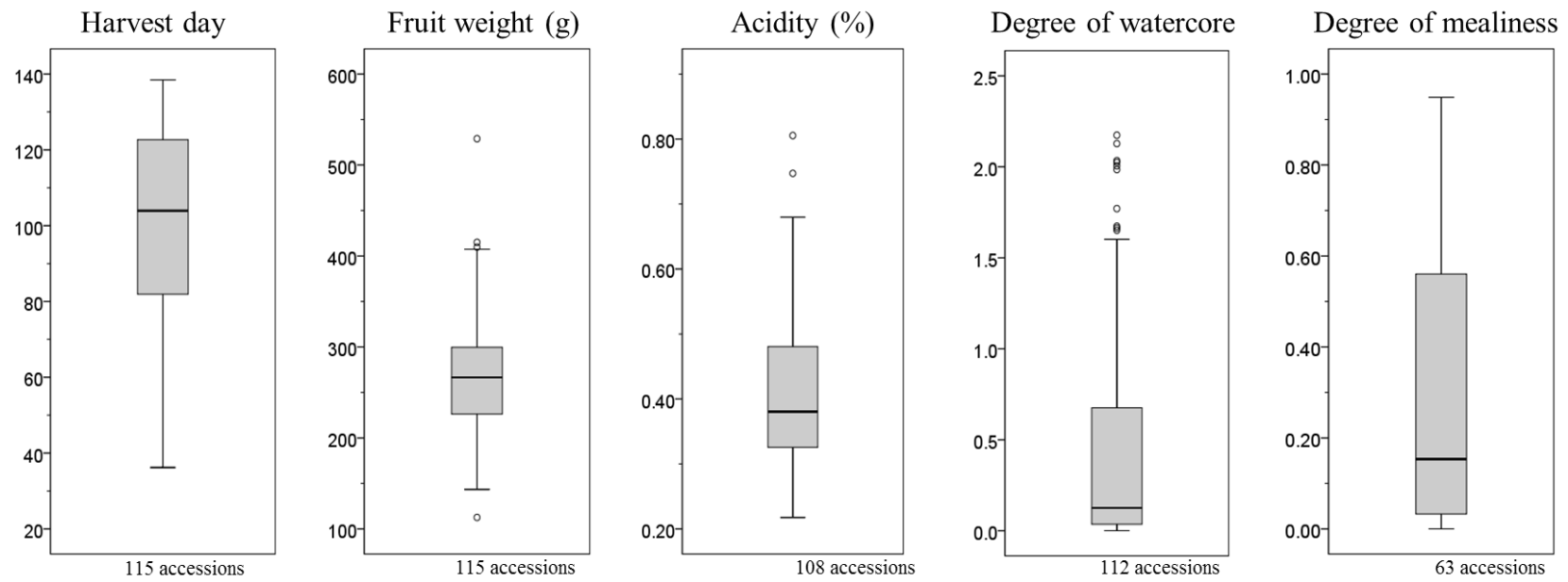
Supplemental Fig. 1. Genetic linkage map obtained from the data for 'Fuji' x 'Golden Delicious' F1 population.

The markers with names starting with MdFJ or MdGD are newly designed SNPs markers (see Results section). Others are published SSR markers, added to confirm the map direction and marker order. When multiple SSR loci were detected by a single primer pair, they were distinguished by adding "-1" or "-2" to the marker name.



Supplemental Fig. 2. Frequency of SNP alleles in common with those of 'Fuji' for 17 chromosomes in 115 accessions.

Alleles derived from 'Ralls Janet' and 'Delicious' were separately calculated. Regions indicated by two-way arrows showed frequency deviation from 1:1 between the two alleles at the level of  $P < 0.05 \times 10^{-3}$ .



Supplemental Fig. 3. Distribution of the five phenotypes examined in the tested accessions.

The bottom and top of the box are the first and third quartiles, respectively, and the horizontal line inside the box is the median. The ends of the whiskers are the lowest and highest data points within a 1.5 IQR from the lower and upper quartiles, respectively. The white circles shows the outliers.