Quantitative trait loci for sensory and textural properties of Chinese white noodles from a population of recombinant inbred lines of winter wheat

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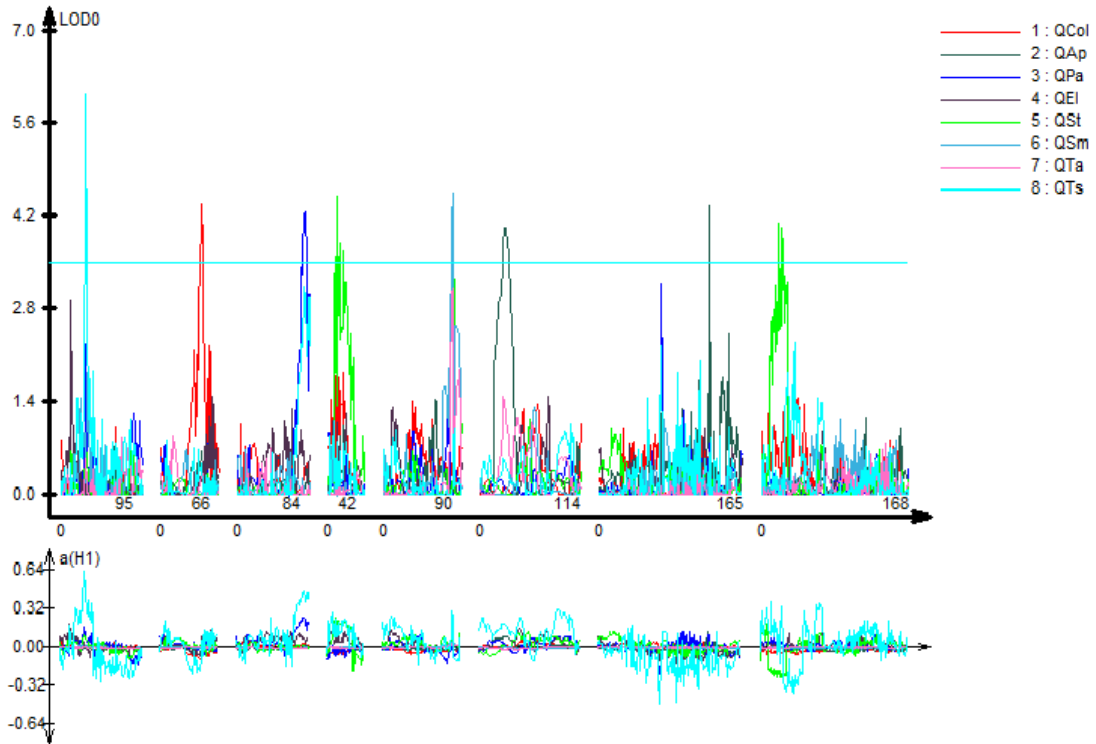
Supplemental data
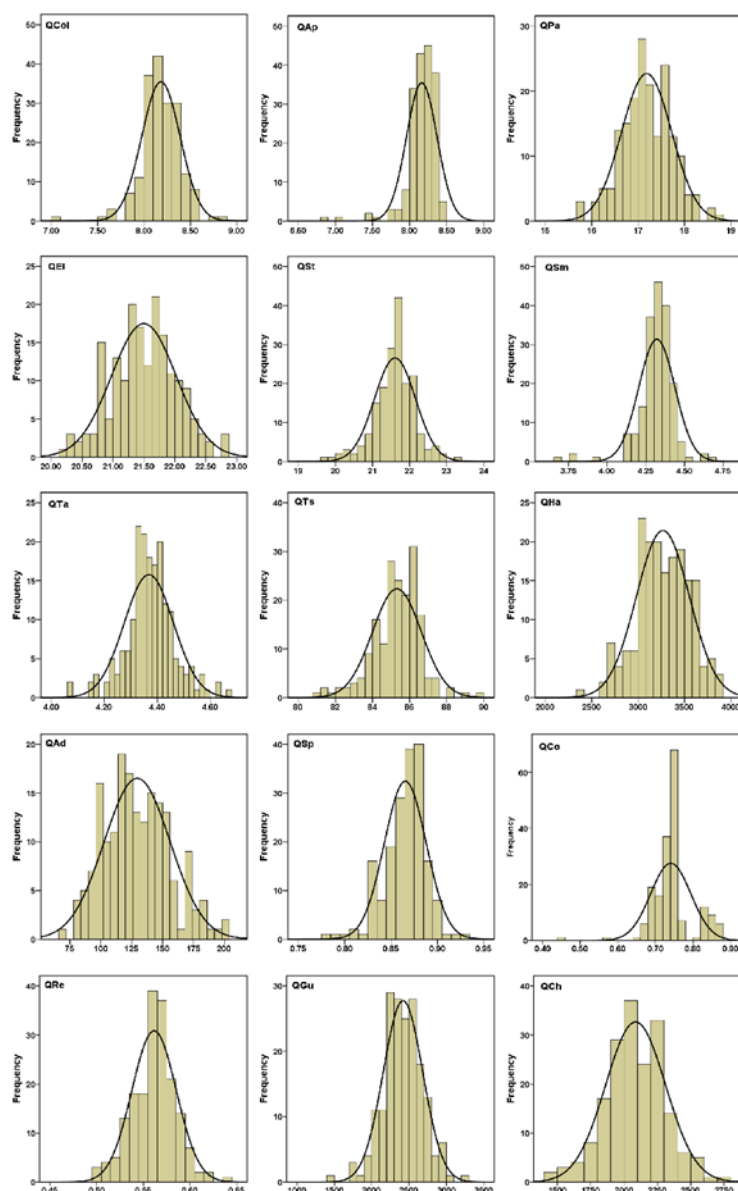
Supplementary material Fig. 1. Frequency distributions of the Chinese white noodle sensory and textural properties traits in 184 RIL lines derived from LM6 × TN18, evaluated in three environments.
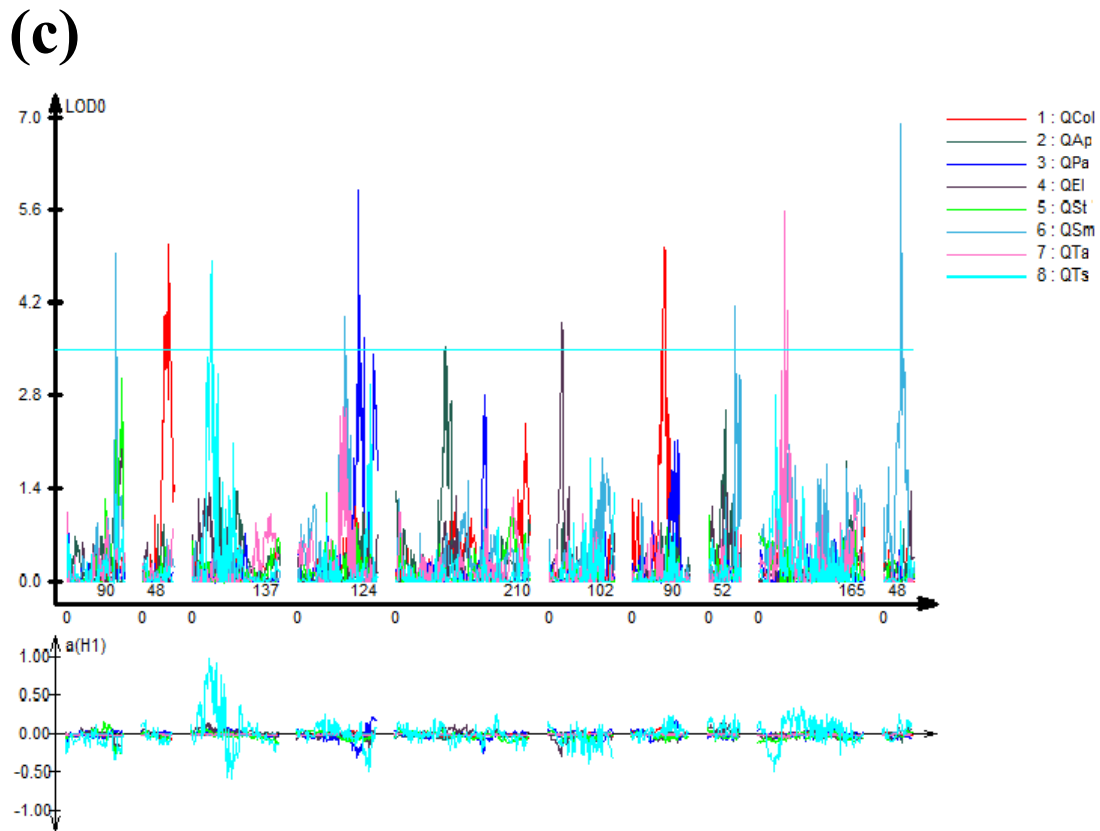
QHa, QAd, QSp, QCo, QGu, QCh, QRe, QCol, QAp, QPa, QEl, QSt, QSm, QTa and QTs are the traits of hardness, adhesiveness, springiness, cohesiveness, resilience, gumminess, chewiness, color, appearance, palate, elasticity, stickiness, smoothness, taste and the total score, respectively.
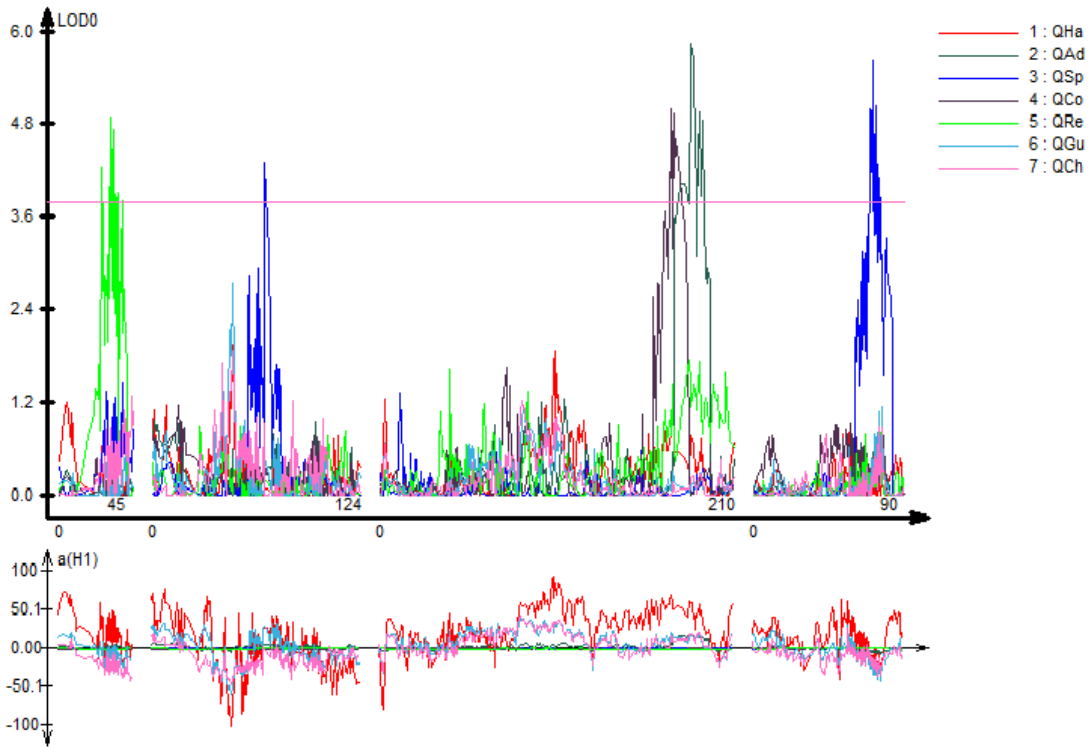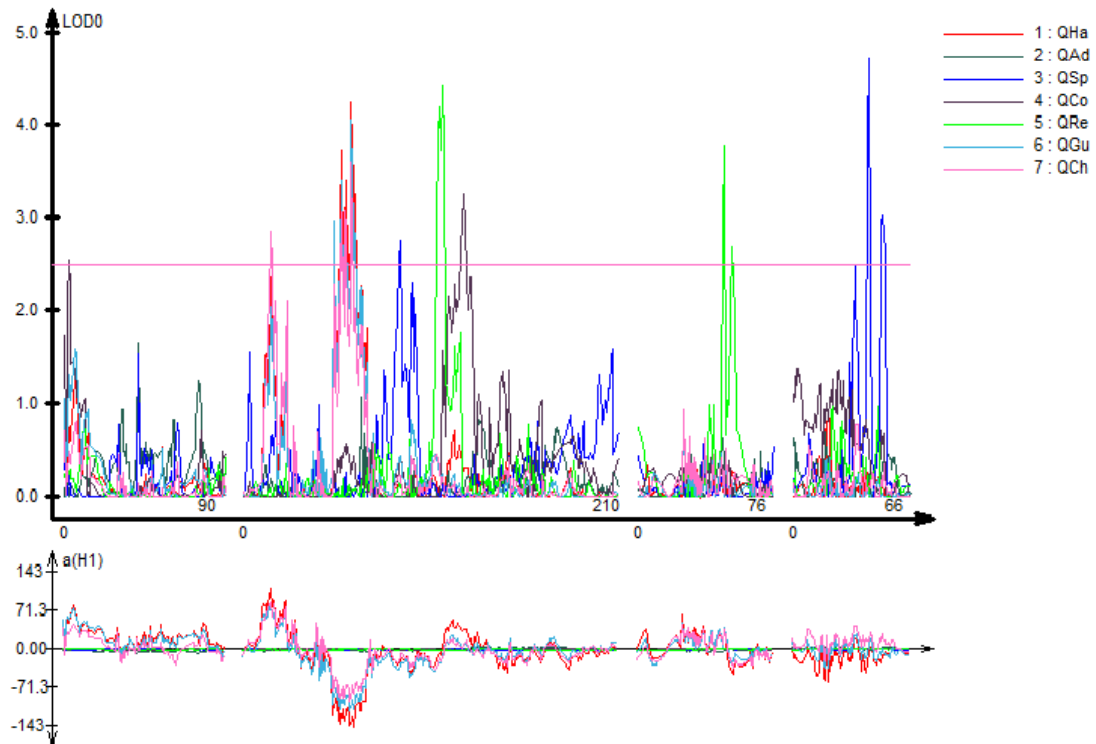
(a)

(b)

(c)
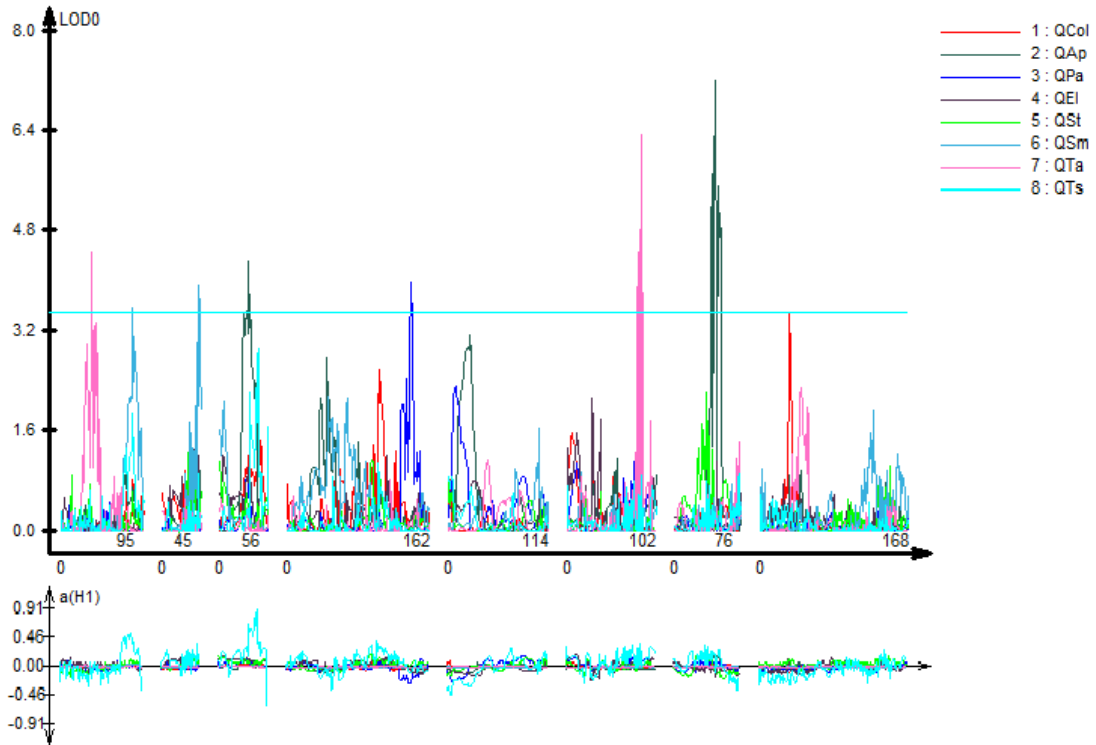
Supplementary material Fig. 2. LOD score plots obtained by the composite interval analysis for Chinese white noodle sensory traits in the Tainong18/Linmai6 RIL population.

QTL analysis was performed using the Windows QTL Cartographer 2.5 software and the LOD scores plotted separately for the RIL population on the chromosome map. LOD significance thresholds were determined by 1000 permutations for the population in each year, and are shown as horizontal lines. (a) QTLs of sensory in 2011; (b) QTLs of sensory in 2012; (c) QTLs of sensory in 2013. The lower graphs show plots of the additive effect of each region on the phenotype with respect to the responding allele. QCol, QAp, QPa, QEl, QSt, QSm, QTa, and QTs are the QTLs for color, appearance, palate, elasticity, stickiness, smoothness, taste and the total score, respectively.
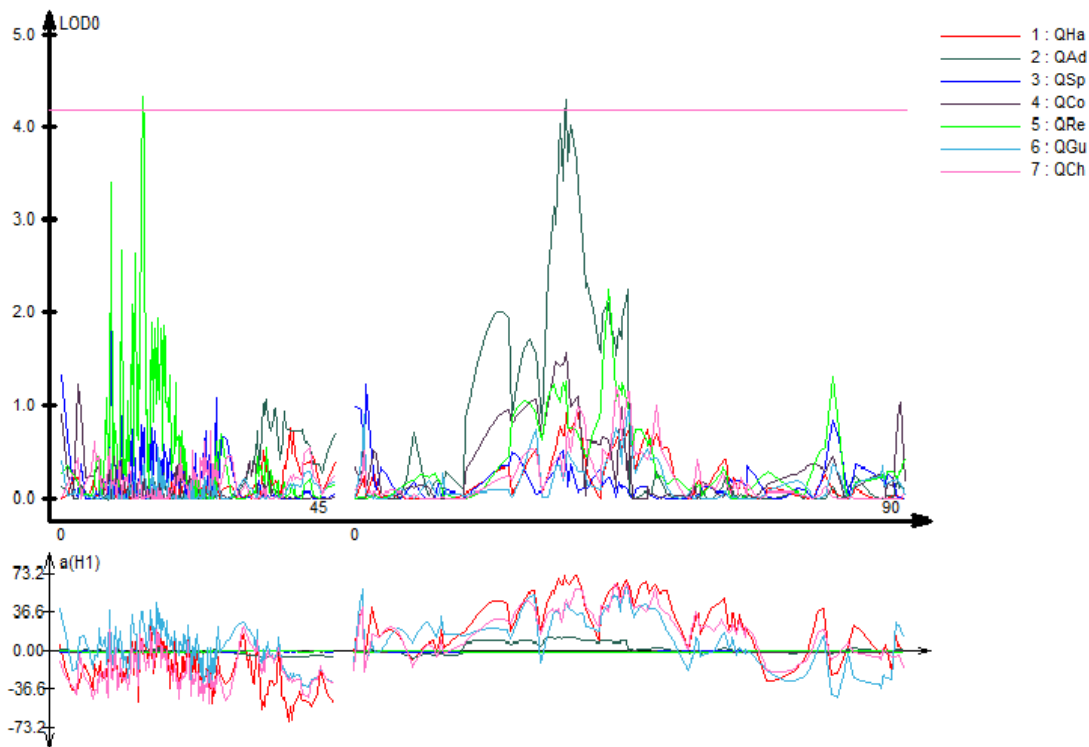
(a)

(b)

(c)

Supplementary material Fig. 3. LOD score plots obtained by the composite interval analysis for Chinese white noodle textural traits in the Tainong18/Linmai6 RIL population.

QTL analysis was performed using the Windows QTL Cartographer 2.5 software and the LOD scores plotted separately for the RIL population on the chromosome map. LOD significance thresholds were determined by 1000 permutations for the population in each year, and are shown as horizontal lines. (a) QTLs of sensory in 2011; (b) QTLs of sensory in 2012; (c) QTLs of sensory in 2013. The lower graphs show plots of the additive effect of each region on the phenotype with respect to the responding allele. QHa, QAd, QSp, QCo, QGu, QCh, and QRe are the QTLs for hardness, adhesiveness, springiness, cohesiveness, resilience, gumminess and chewiness, respectively.