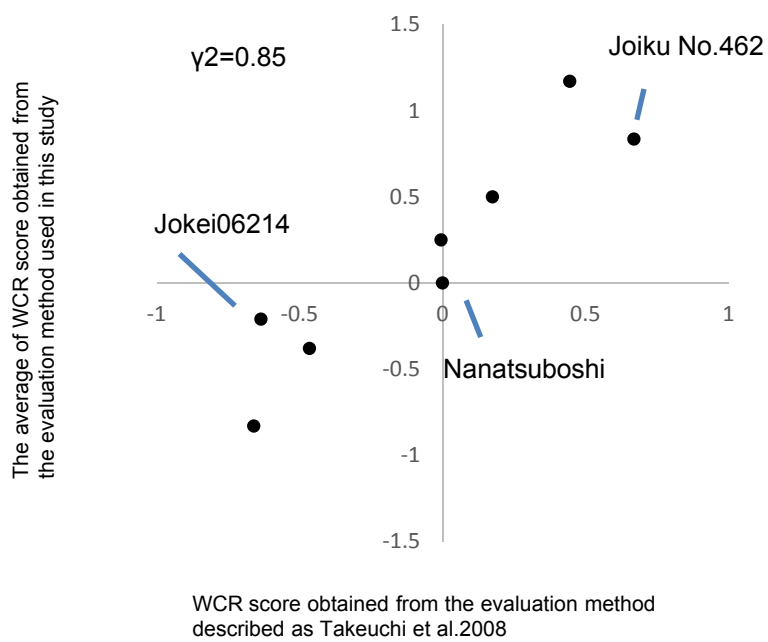


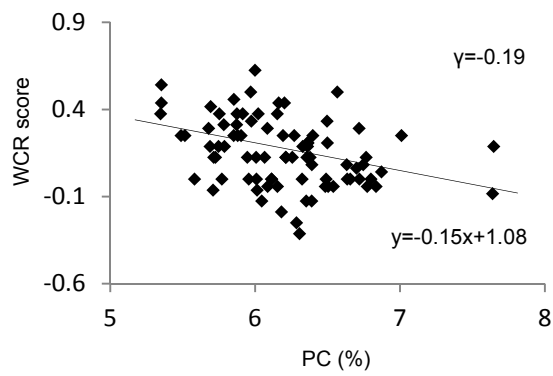
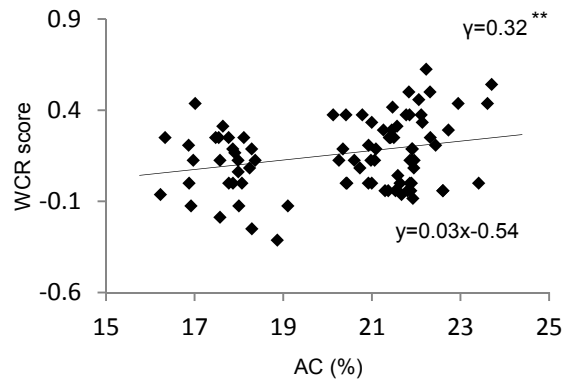
**Supplemental Fig. 1.** The pedigree of nine cultivars used in this study and genetic type of the QTLs for WCR. Inheritance of  $qWCR3$ ,  $qWCR11$  were assessed by haplotype diversity of four SNP markers linked to  $qWCR3$  or  $qWCR11$  region, respectively.



**Supplemental Fig. 2.** Comparison of WCR score obtained from two methods for evaluation of WCR. The WCR scores of Joiku No.462, Hoshinoyume, Kirara397 obtained from the method used in this study are the means of two-year analysis.



**Supplemental Fig. 3.** WCR of seven cultivars from Hokkaido. The cooked rice in this figure were products harvested in 2013. Hoshimaru was included as a reference cultivar for low WCR.



**Supplemental Fig. 4.** Variation of WCR and PC or AC of endosperm in the DHL population. \*\* shows a significant correlation at a P=0.01 significance level.