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# Days to Heading and Glossiness Variation of RILs derived from Hwayeong and Wandoaengmi 6

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**[Abstract]**
Improving the taste of rice in the breeding process is one of the important goals. However, it takes a lot of time and effort to select lines with good grain quality. MAS related to rice quality can help quickly and accurately select the elite lines in breeding programs. QTL *qTV9,* derived from Wandoaengmi 6, has been reported as a marker associated with improved glossiness of rice (Park et al., 2019). To confirm the function of QTL *qTV9,* 186 RILs derived from Hwayeong/Wandoaengmi6 were cultivated on ordinary planting cultivation for five years. The average DTH of Hwayeong and Wandoaengmi 6 was not significant at 99 and 97 days, respectively, but the averages of TV (toyo value) were 72.6 and 86.0, respectively. The DTH and TV of RIL vary from year to year. In 2017–2018, the average DTH was 98 days, which was significantly higher than the other three years. In 2018 and 2021, the average TV was 79.5 and 86.5, respectively, which were significantly higher than in other years. As a result of correlation analysis, DTH in the different years showed highly significant positive correlations (r = 0.71-0.92) from 0.71 to 0.92, whereas TV showed positive but weaker correlations (r = 0.42-0.71). The correlation between DTH and TV in each year was significant but weak (r = 0.25-0.64) and there was no correlation in 2017. The TV (77.6-88.7) of RILs with QTL *qTV9* was significantly higher than that of RILs without *qTV9* (72.6–84.9) for all five years. As a result of analyzing TV by DTH group, the TV of the lines with *qTV9* in DTH groups (93-97) and (98-103) showed a significantly higher trend for all 5 years. And TV was not significant in DTH groups A, B, E, and F. This may have been influenced by factors such as insufficient populations between groups or differences in harvest timing. This study is expected to be used as data for improving the glossiness of cooked rice in breeding programs, and further study of the QTL *qTV9* marker is required.

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