| T1(1cm) | T2(3cm) | T3(5cm) | T1(1cm) | T2(3cm) | T3(5cm) |

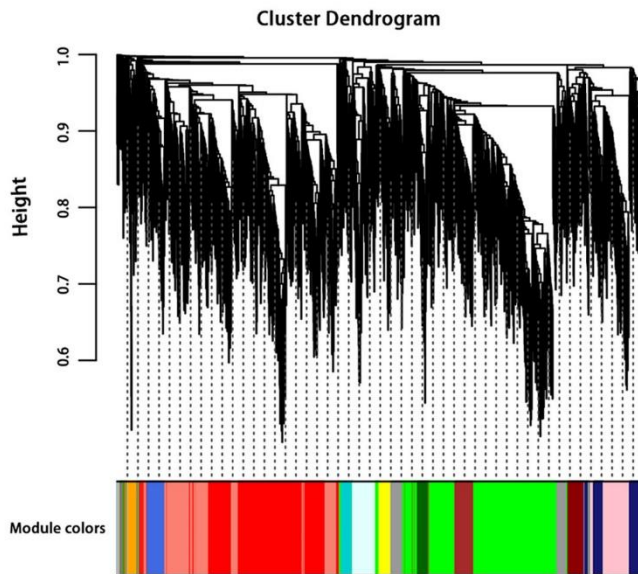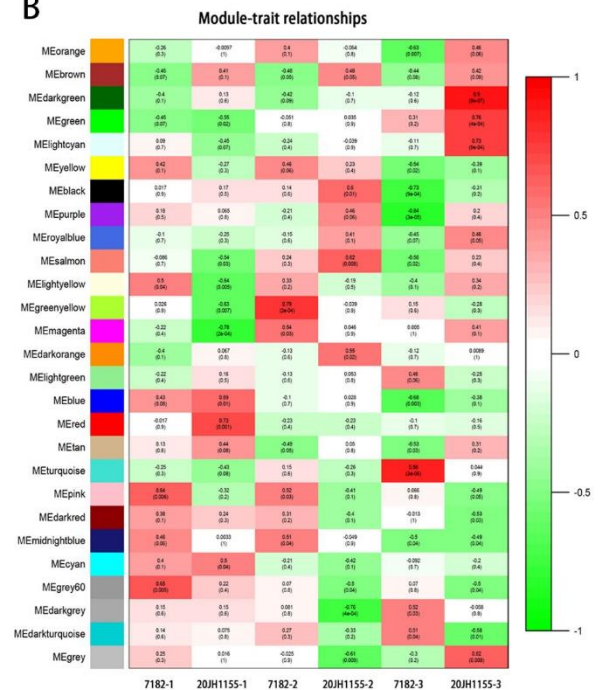| 7182-1 | 7182-2 | 7182-3 | 20JH1155-1 | 20JH1155-2 | 20JH1155-3 |

Supplemental Figure S1. Developmental stages of spikes used for sampling in this study. T1, T2, T3 correspond to 3 developmental points (Feekes 6,7,8) at jointing stage and booting stage.

Supplemental Figure S2. Clustering and module identification of co expressed genes.
（A） Hierarchical clustering tree of DEGs by WGCNA. A total of 27 modules were divided according to gene function. **(B)** Module–time relationships. The value above the box represents the correlation coefficient between the module and time as well as the value below represents the significance between them.