



**Supplementary Fig. S5** Manual validation of the inversion regions of Chromosome 13 and Chromosome 14. The original enlarged HiC heatmap of Chromosome 13 was shown in Figure A, and the manually reversed graph was shown in Figure B. As indicated by the black arrow, there were more conflicts in the manually reversed version, underlying our assembly was correct and the inversion regions were present in the ginger genome. Similarly, this occurred in Chromosome 14 as indicated by the arrow (Figure C and D).