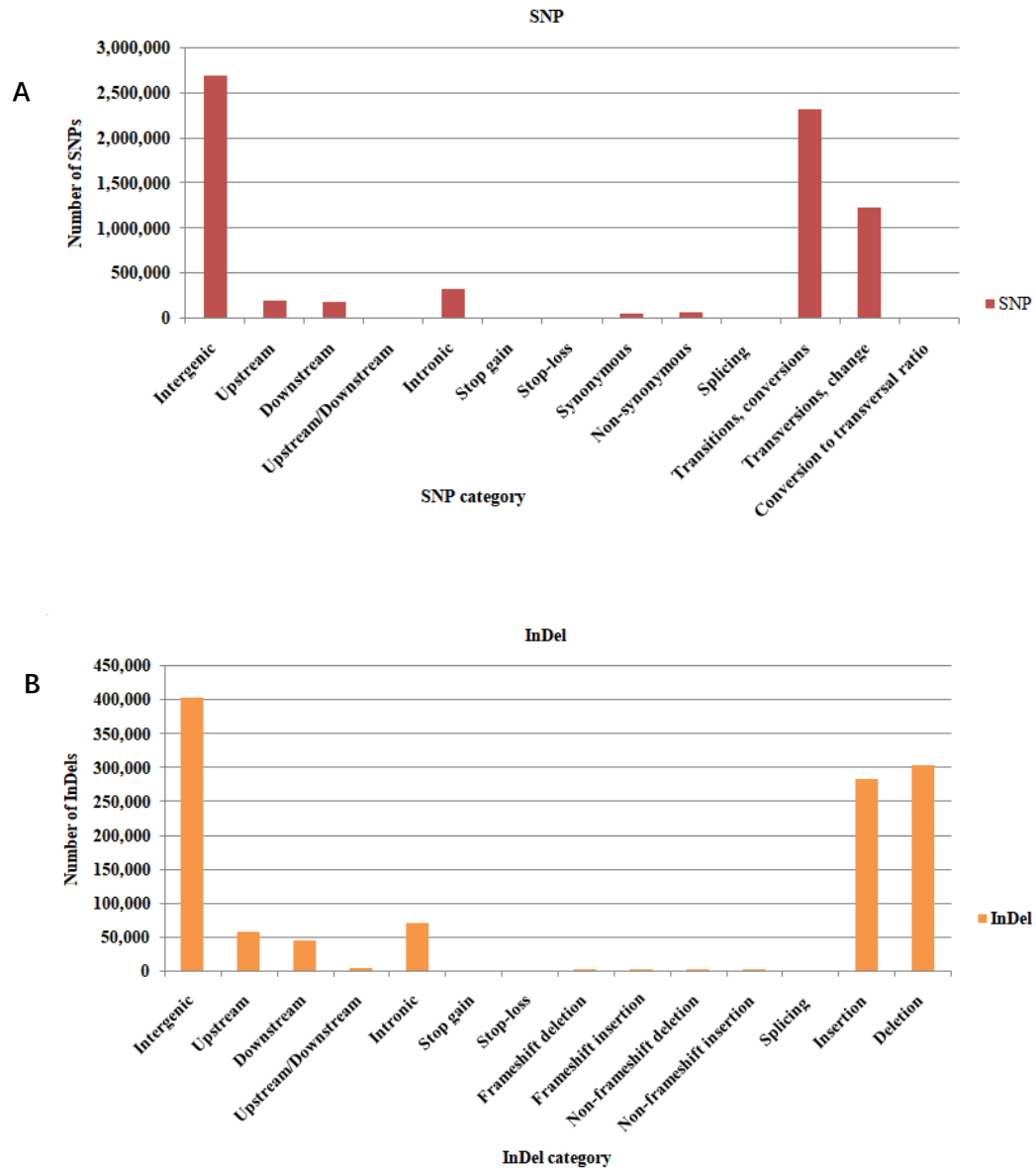
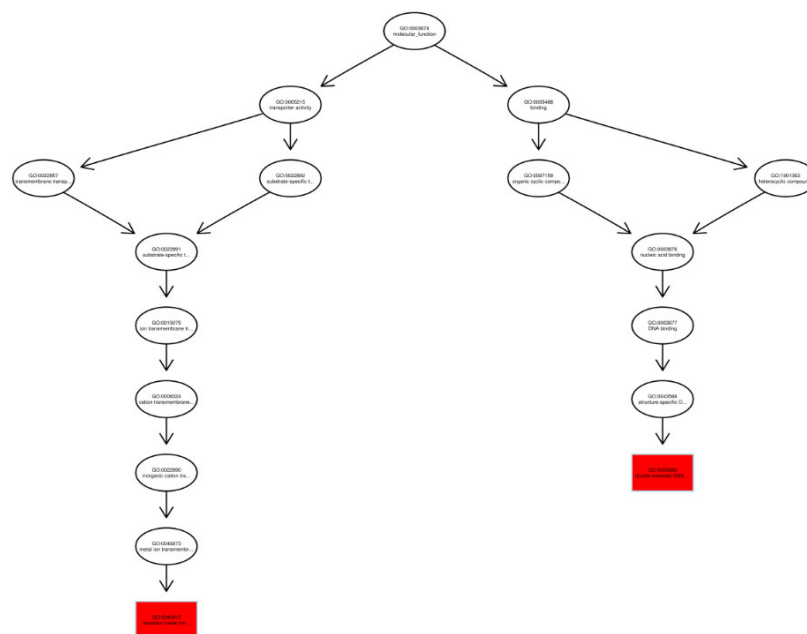


**Figure S1.** The frequency distribution of tocopherol content in a natural population of soybean. The red and green dashed lines indicate the mean of the low and high tocopherol pools of soybean, respectively.

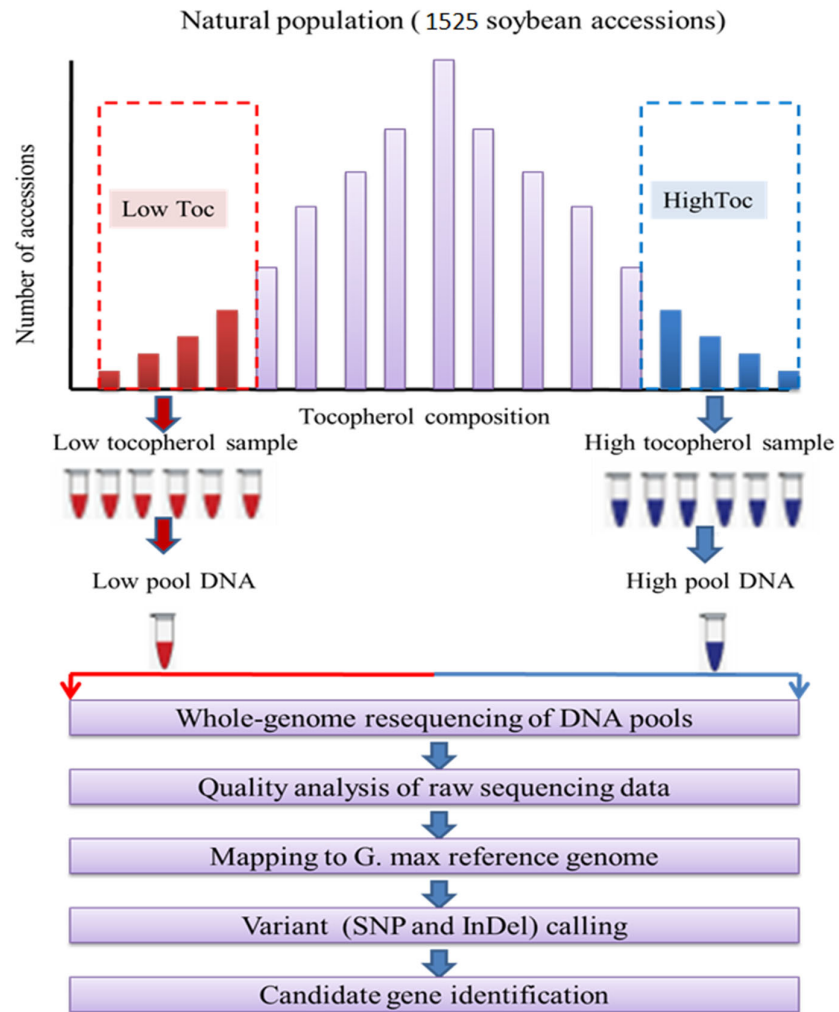


**Figure S2.** SNPs (A) and InDels (B) distribution between the two soybean sample bulks of tocopherol composition.

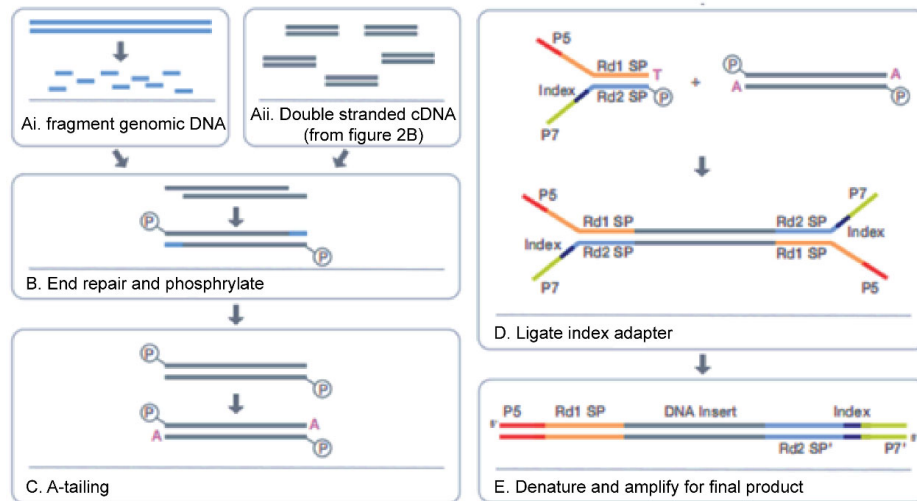




**Figure S4.** Gene ontology enrichment analysis based on molecular function. The red boxes represent the two most enriched terms (Transition metal ion transmembrane transporter activity and double stranded DNA binding).



**Figure S5.** Schematic diagram of BSA-seq method pipeline



**Figure S6.** The process of genomic DNA library construction