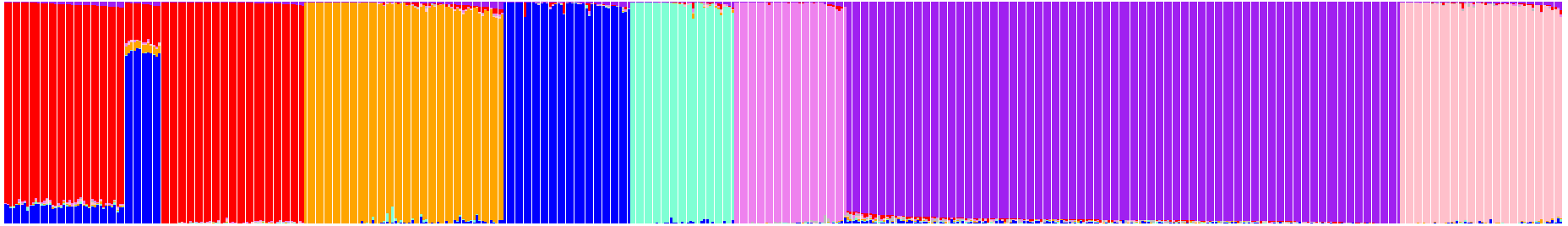
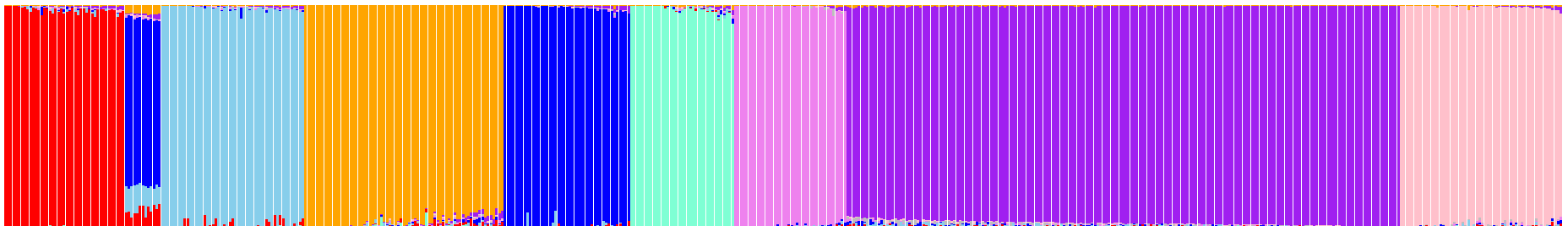


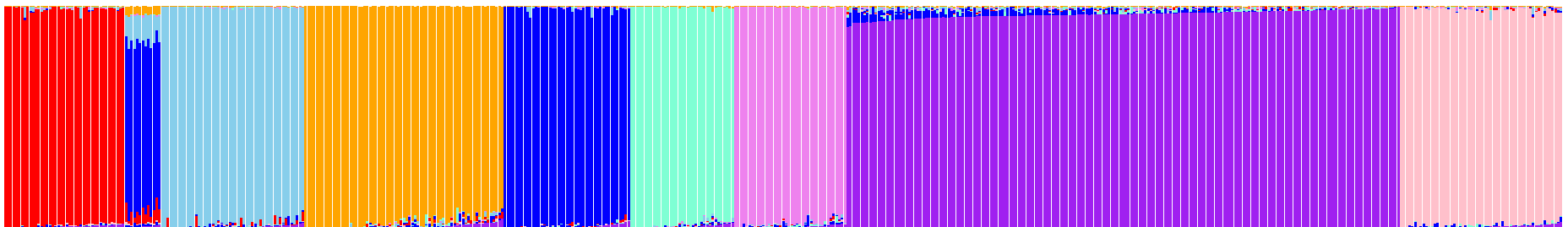
K = 8



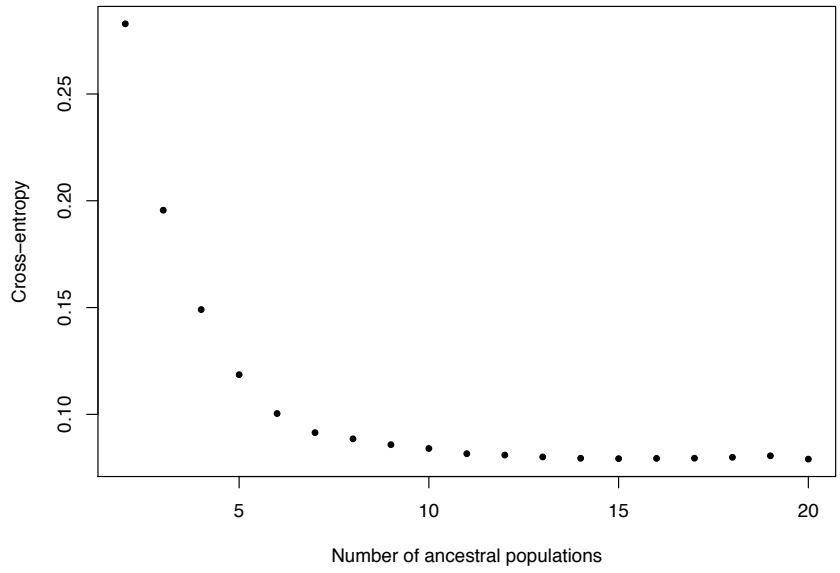
K = 9



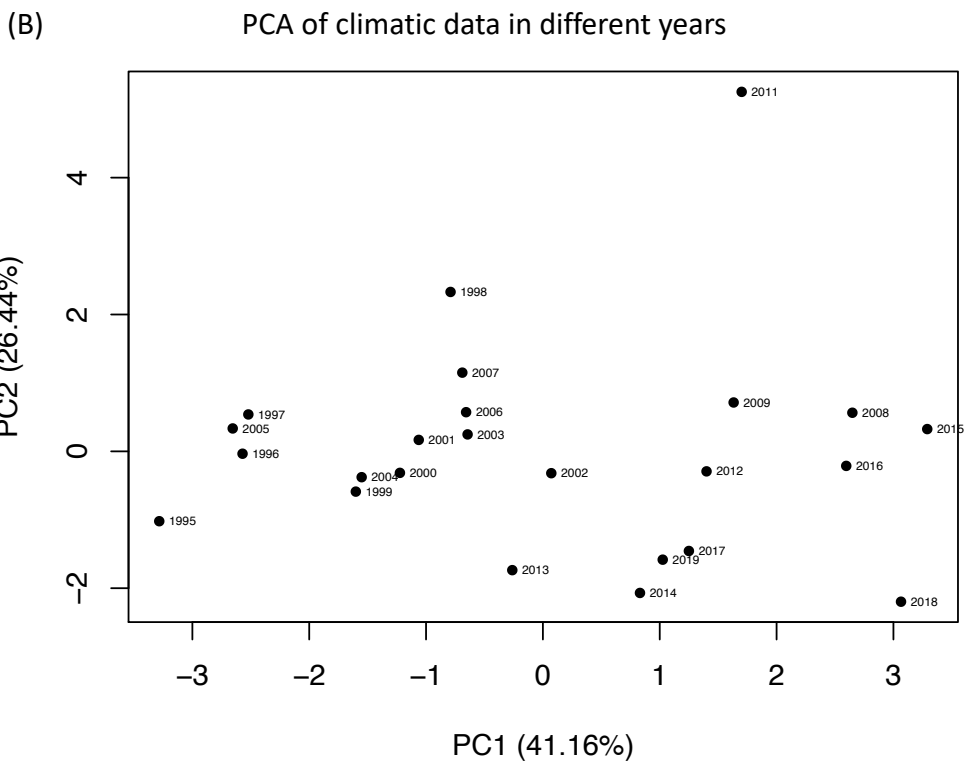
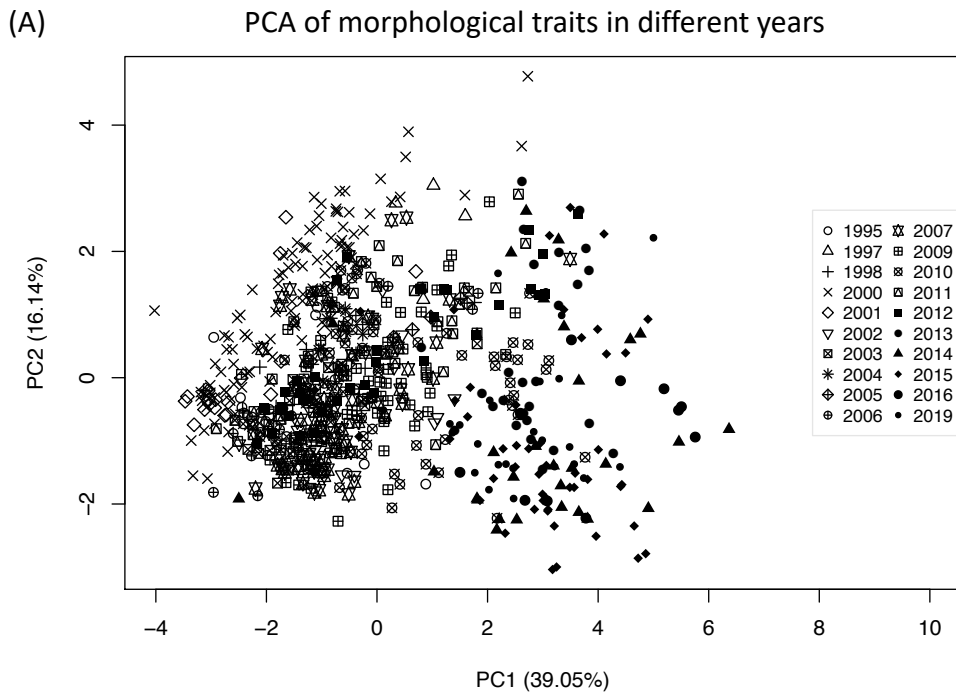
K = 10



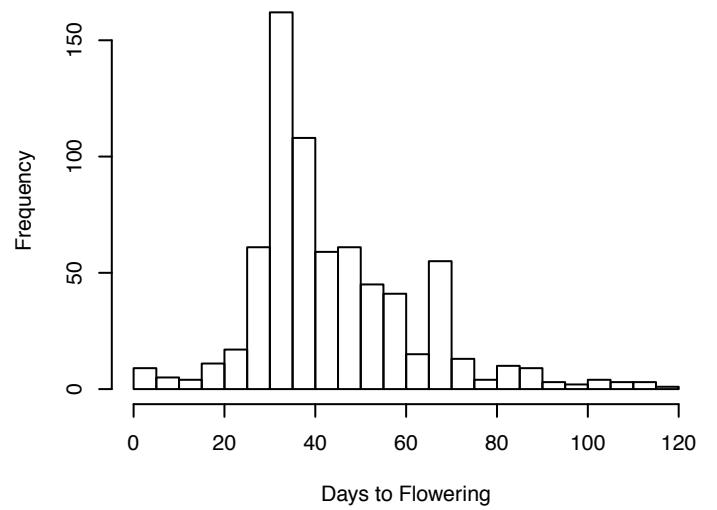
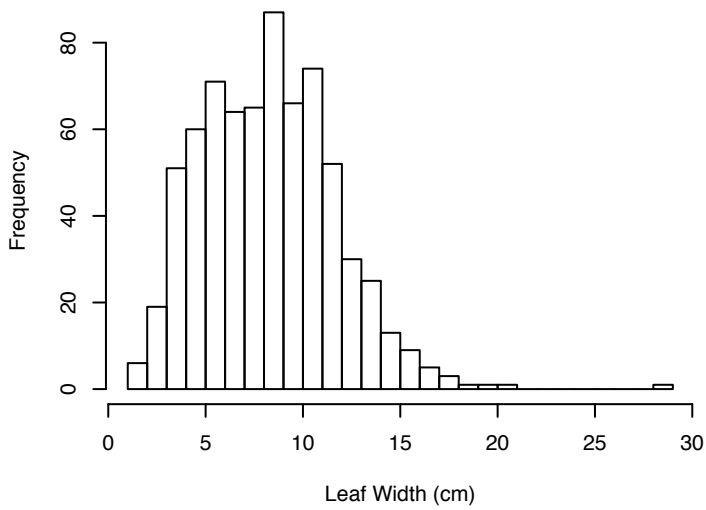
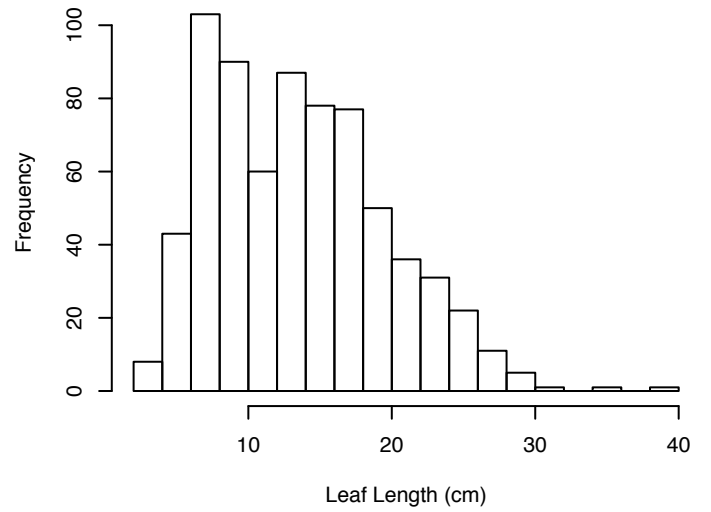
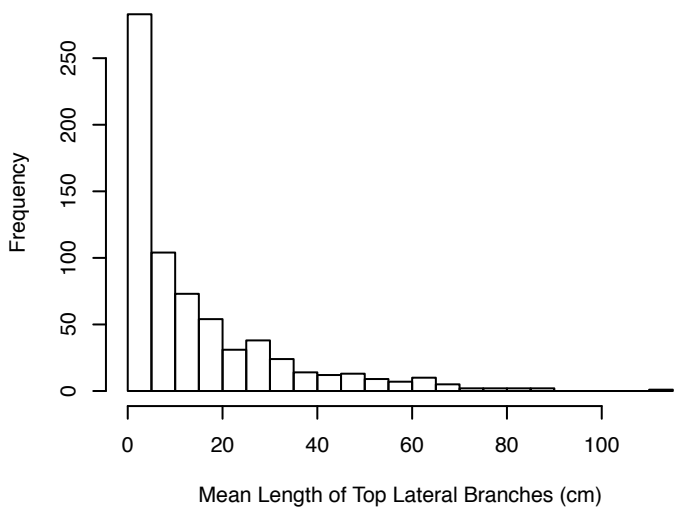
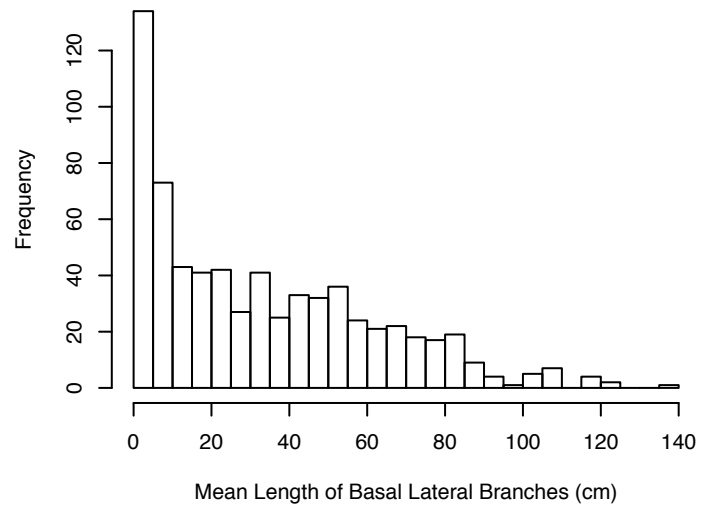
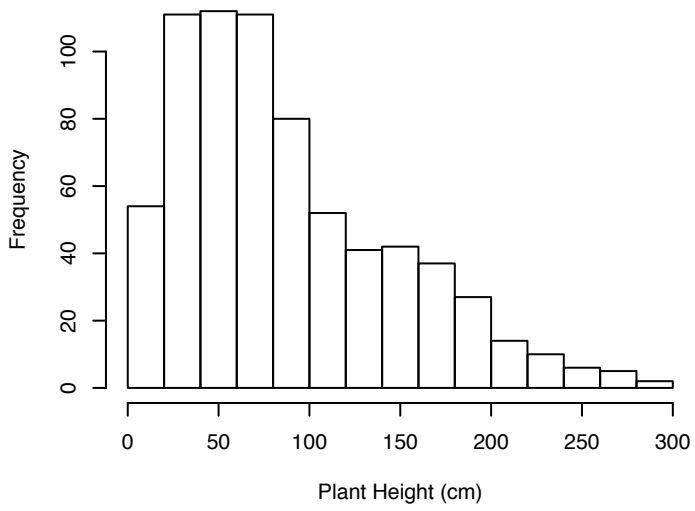
Supplementary Figure 1. Structure analysis of K = 8, 9, and 10. The accessions are in the same order as in the structure plot of K = 11 (Figure 4D).

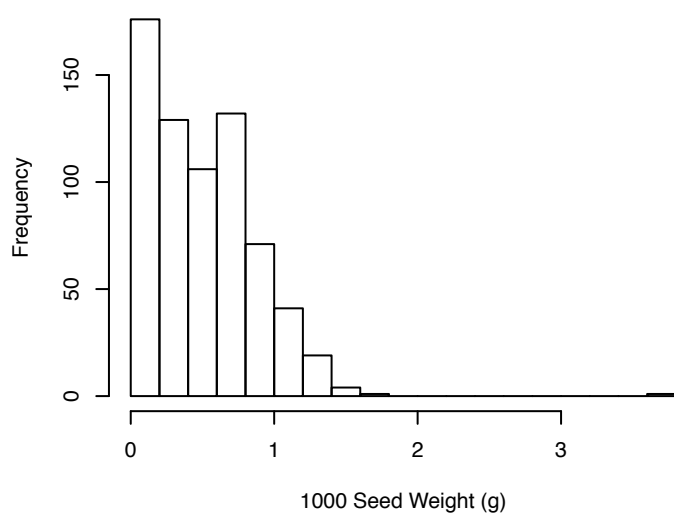
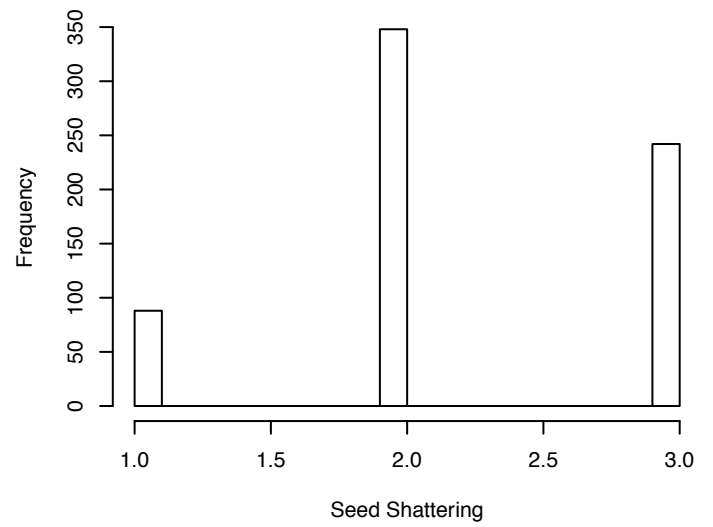
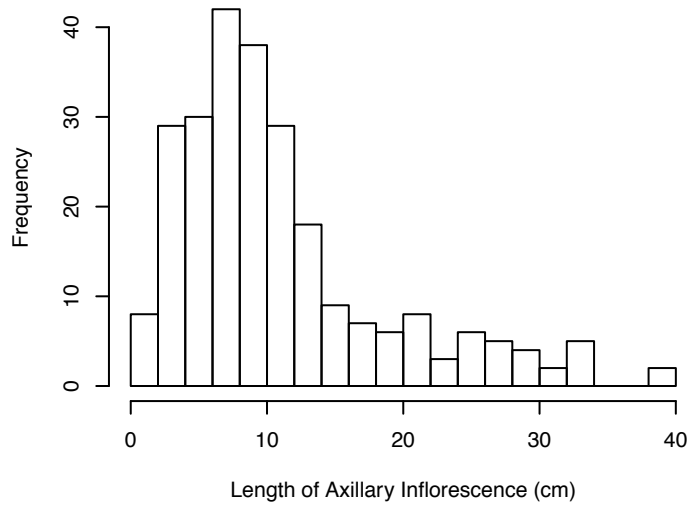
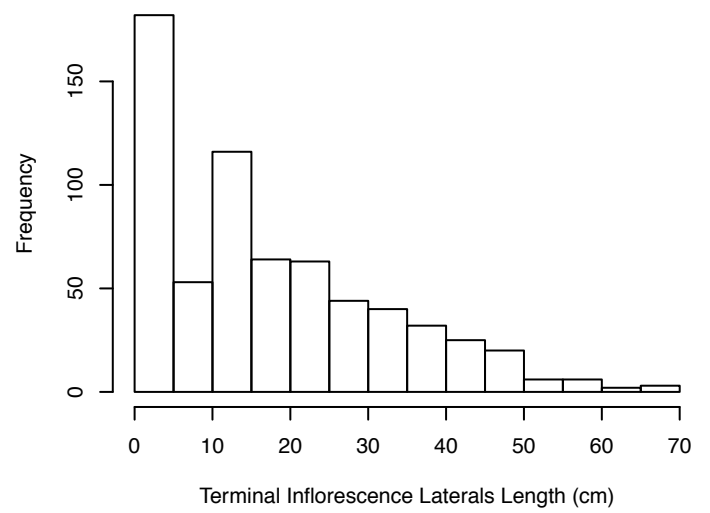
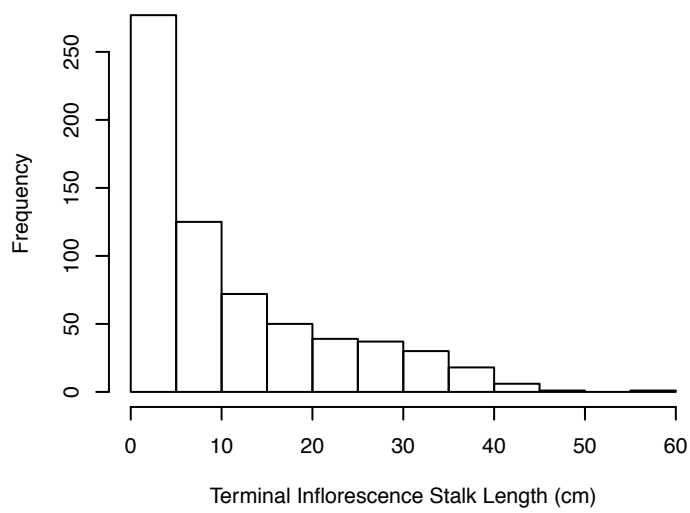


Supplementary Figure 2. Cross-validation of the structure analysis.

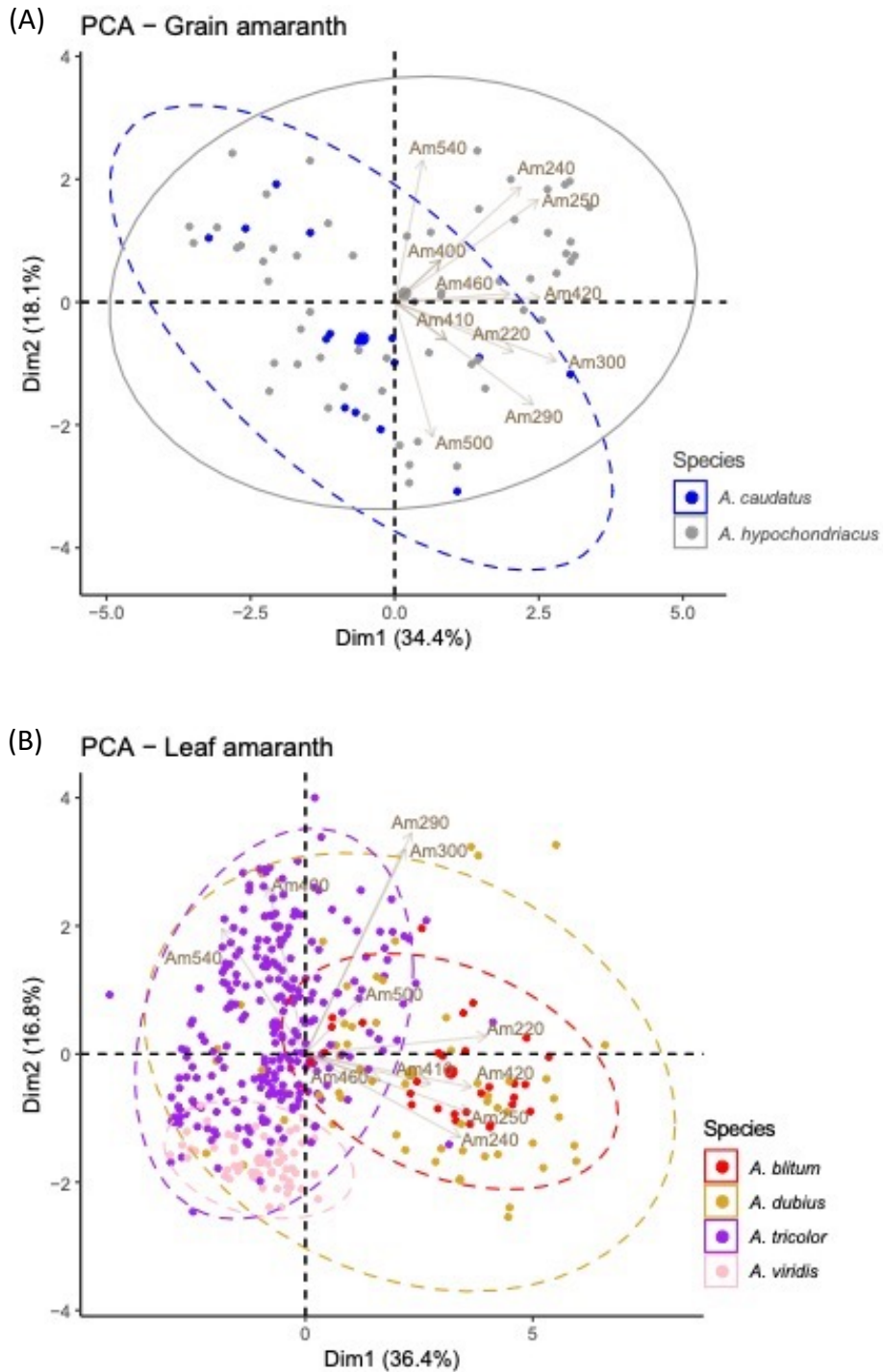


Supplementary Figure 3. Principal Component Analysis of (A) the quantitative traits and (B) the climatic variables across the regeneration years, respectively.





Supplementary Figure 4. Distributions of the quantitative traits in the germplasm panel.



Supplementary Figure 5. Principal Component Analysis of the quantitative traits of (A) the grain amaranths and (B) the leaf amaranths, respectively. The trait codes refer to the descriptor.