



**Appendix G** PCA ordination results for S×R doubled haploid population and parents under two N regimes, (A) high N and (B) low N. Black arrows indicate directions of loadings for each trait. Correlation matrix of extracted root traits under two N regimes, (C) high N and (D) low N. Correlations are colour coded from strong positive correlation in red to strong negative correlation in blue with no correlation shown in white.