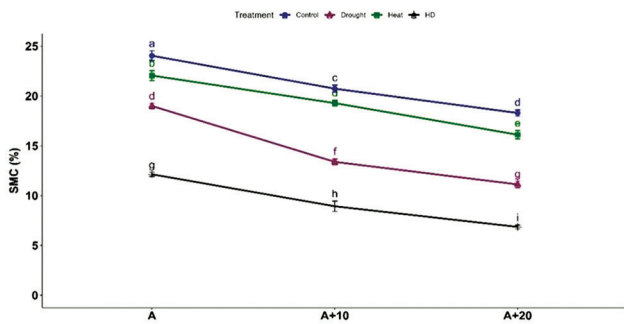
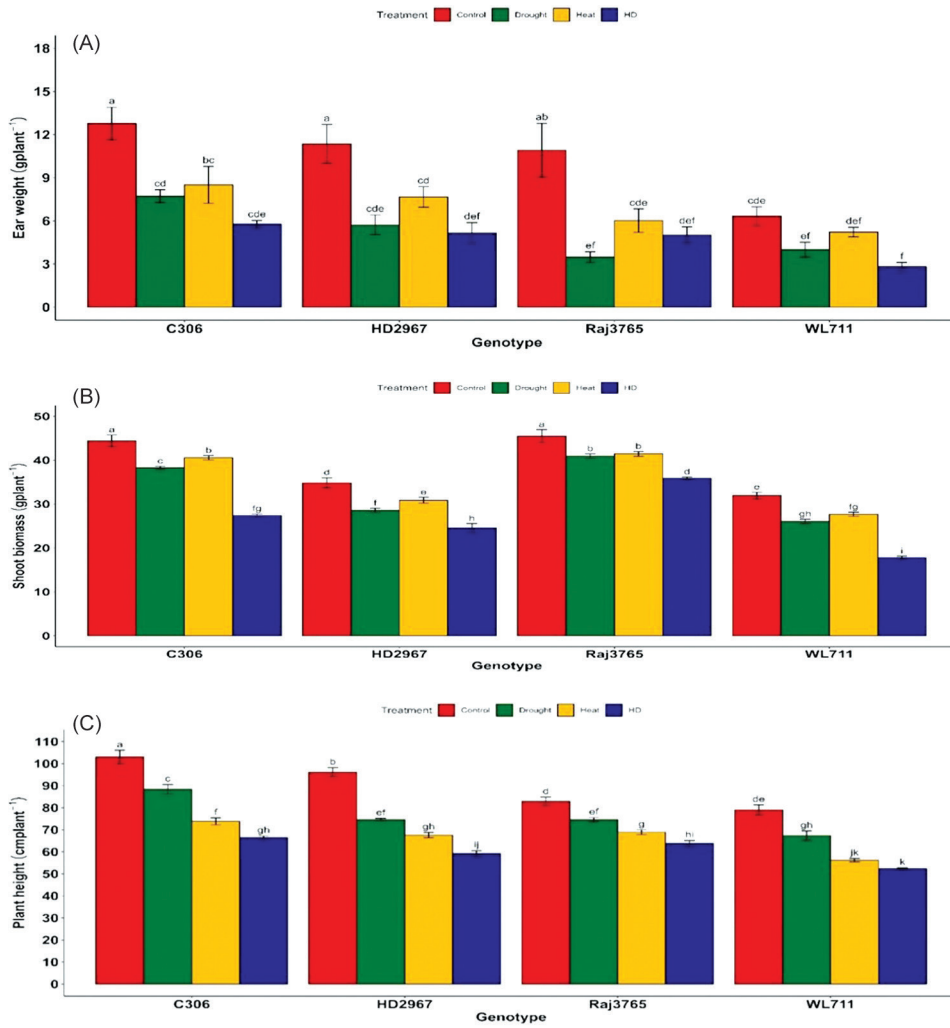


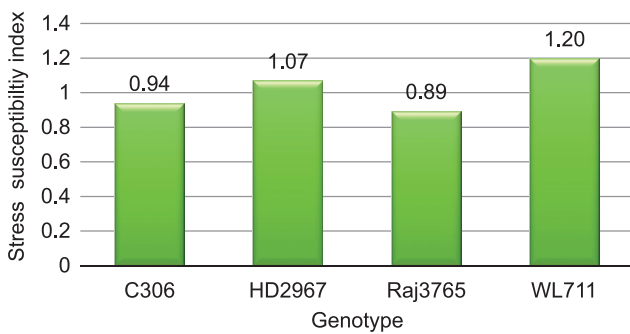
Supplementary Fig. 1 Weather data for 2021–22 during the growing period of wheat. The maximum and minimum mean temperature was recorded as 25.70°C and 10.60°C, respectively.



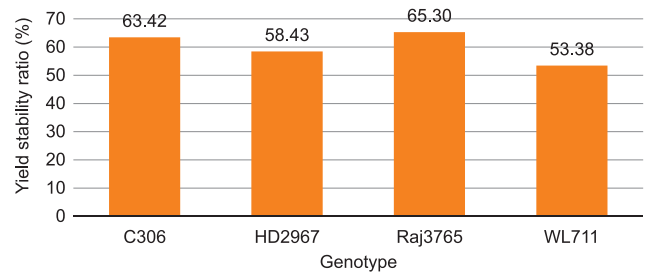
Supplementary Fig. 2 Effect of individual and combination stress conditions on the percentage of soil moisture content at A, A+10, and A+20. Mean values with the same alphabet on top indicate no significant difference ($p < 0.05$) at a specific time of measurement.



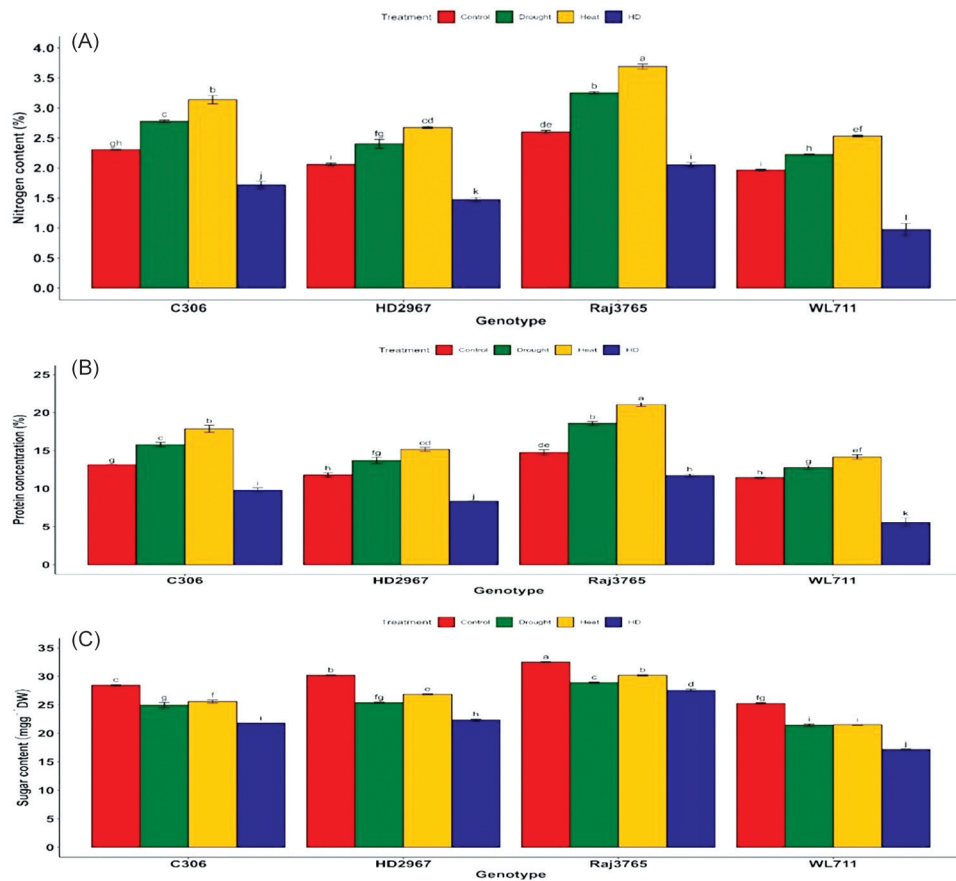
Supplementary Fig. 3 The ear weight (A), shoot biomass (B) and plant height (C), were calculated in all the wheat genotypes under control, drought, heat and combined stress conditions. Mean values with capped bars indicate \pm SE of three replicates. Statistically significant differences ($p < 0.05$) between genotypes were determined by the Duncan multiple range test. Mean values with the same alphabets on top are not statistically significant ($p < 0.05$) at a specific measurement time.



Supplementary Fig. 4 Stress susceptibility index (%) in all four contrasting wheat genotypes grown under control, drought, heat and combined stress conditions.



Supplementary Fig. 5 Yield stability ratio (%) in all four contrasting wheat genotypes grown under control, drought, heat and combined stress conditions.



Supplementary Fig. 6 Nitrogen content (A), Protein content (B) and sugar content (C) in wheat grains under control, drought, heat, and combined stress conditions at harvest time. Mean values with capped bars indicate \pm SE of three replicates. Statistically significant differences ($p < 0.05$) between genotypes were determined by the Duncan multiple range test. Mean values with the same alphabets on top are not statistically significant ($p < 0.05$) at a specific measurement time.