

Figure S1. The difference in cane yield and the percentage reduction in yield among 40 sugarcane genotypes under both non-stressed and drought-stressed conditions in field environments [54]. Bars with different letters, as well as A and B, indicate a significant difference determined by the least significant difference (LSD) test at $p < 0.05$.

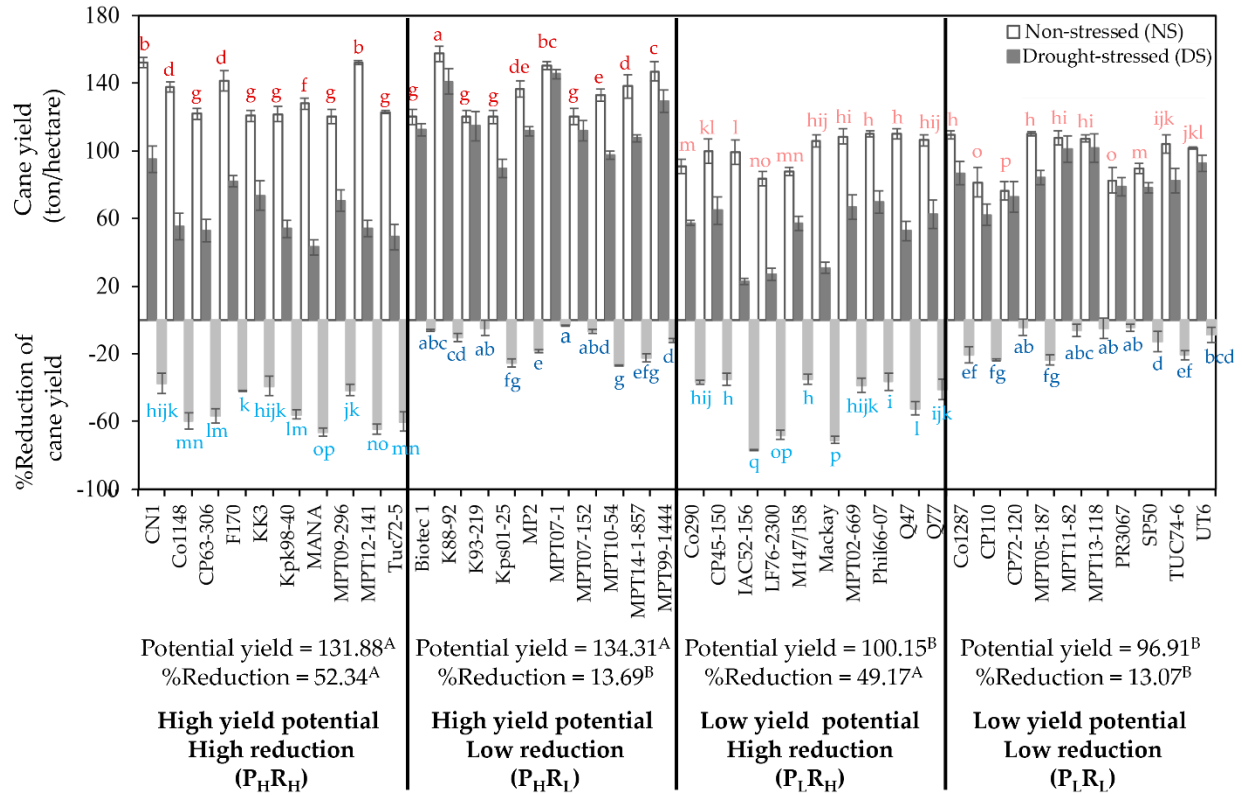


Figure S2. (a) Soil moisture content (%) at the midpoint of soil depths, **(b)** maximum temperature (Tmax, °C), minimum temperature (Tmin, °C), and relative humidity (RH, %) during 91-118 days after planting under greenhouse environments. Asterisks (*) indicate significant variations between treatments at the 0.05 probability level, while "NS" denotes non-significant variations.

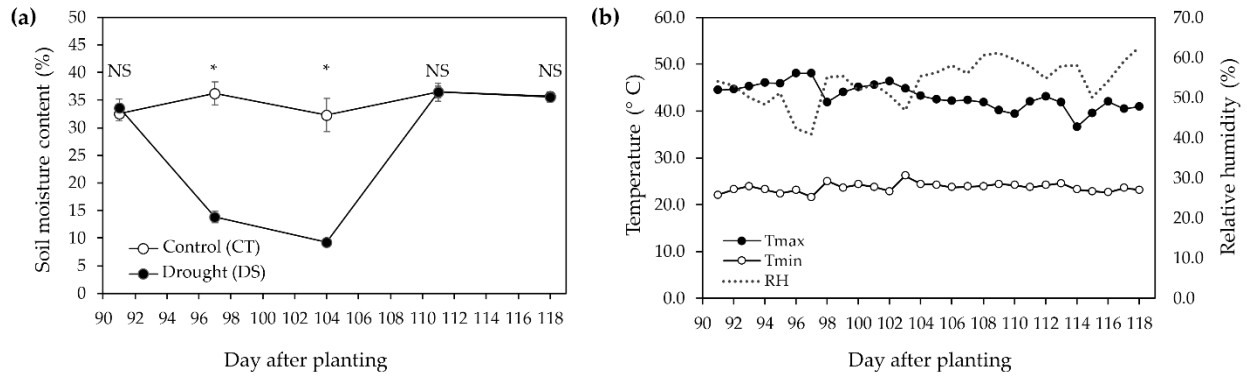


Figure S3. The black circle, white circle, black triangle, and white triangle on the boxes indicate the distribution of sugarcane genotypes in the groups of high yield potential and high reduction ($P_H R_H$), high yield potential and low reduction ($P_H R_L$), low yield potential and high reduction ($P_L R_H$), and low yield potential and low reduction ($P_L R_L$), respectively. HGR = height growth rate; SGR = shoot growth rate; F_v/F_m = the chlorophyll fluorescence ratio; SPAD = estimated chlorophyll content using SPAD units; RWC = leaf relative water content, LR = leaf rolling score; LD = leaf drying score; DR = drought recovery score

