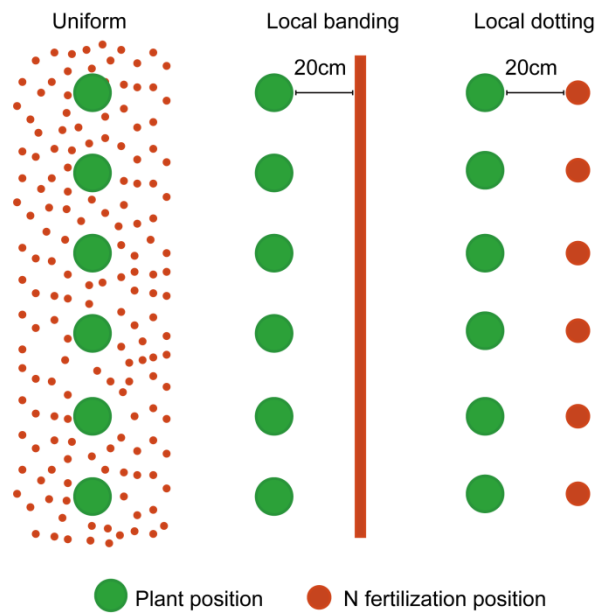
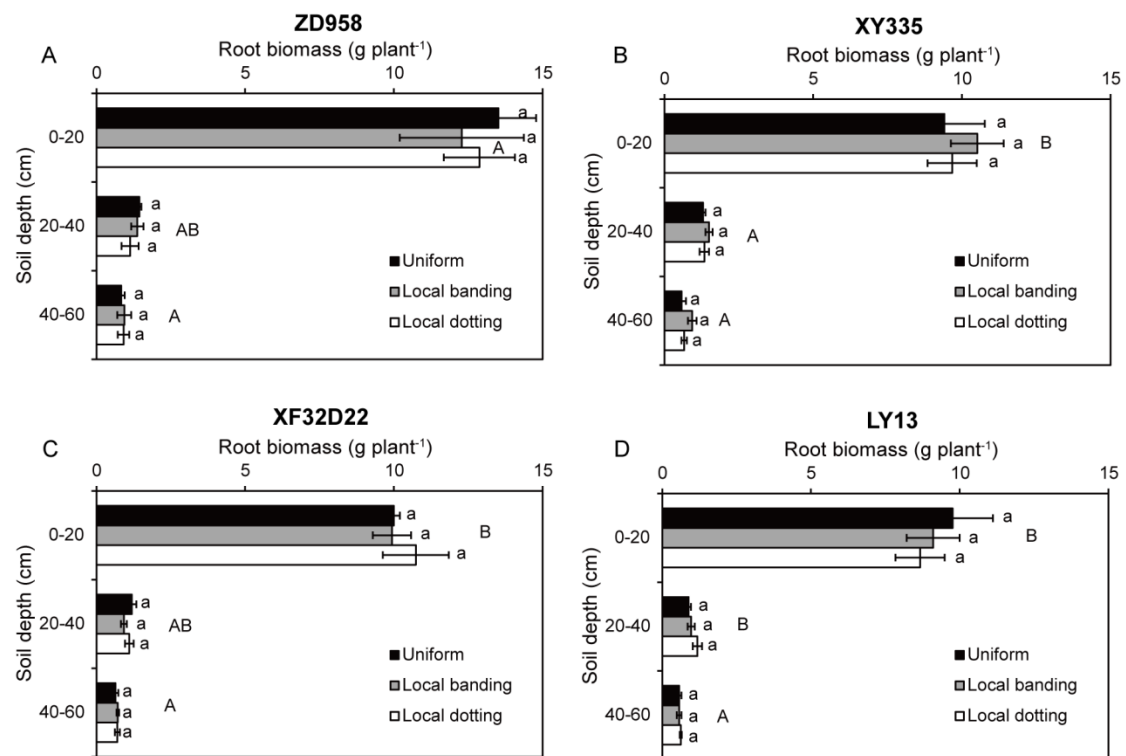


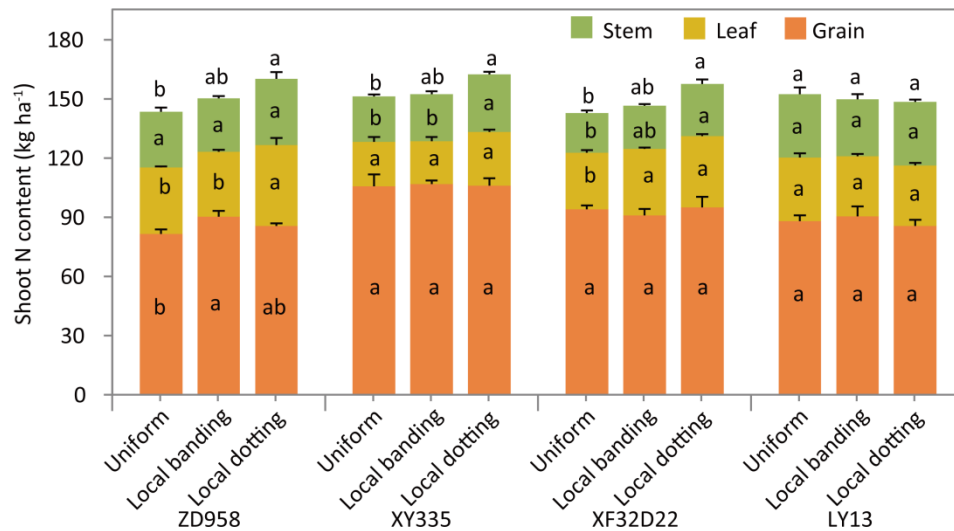
Appendix



Appendix A. Schematic diagram of one uniform fertilizer application and two localized fertilizer applications. The green circle represents the position of the plant. Red represents the position of fertilizer placement.



Appendix B. The effects of local N fertilizer application on maize root biomass of ZD958 (A), XY335 (B), XF32D22 (C) and LY13 (D) in different soil layers. Uniform, local banding and local dotting represent the broadcast N application, banding N application and dotting application treatments. Error bars denote the standard error (SE) of the mean ($n=3$). Different lowercase letters represent significant differences between the three N fertilization treatments ($P<0.05$) at the same soil depth. Different uppercase letters represent significant differences between four genotypes ($P<0.05$) at the same soil depth, and ns represents not significant differences ($P>0.05$).



Appendix C. Genotypic differences in the effects of local fertilization on maize N uptake in different maize organs. Uniform, local banding and local dotting represent the broadcast N application, banding N application and dotting application treatments. Error bars denote the standard error (SE) of the mean ($n=3$). Different lowercase letters represent significant differences between the three N fertilization treatments ($P<0.05$) of the same genotype, the green background, yellow background, orange background and above the bars represent the N content in the stem, leaf, grain and whole plant, respectively.