

Supplemental Figures

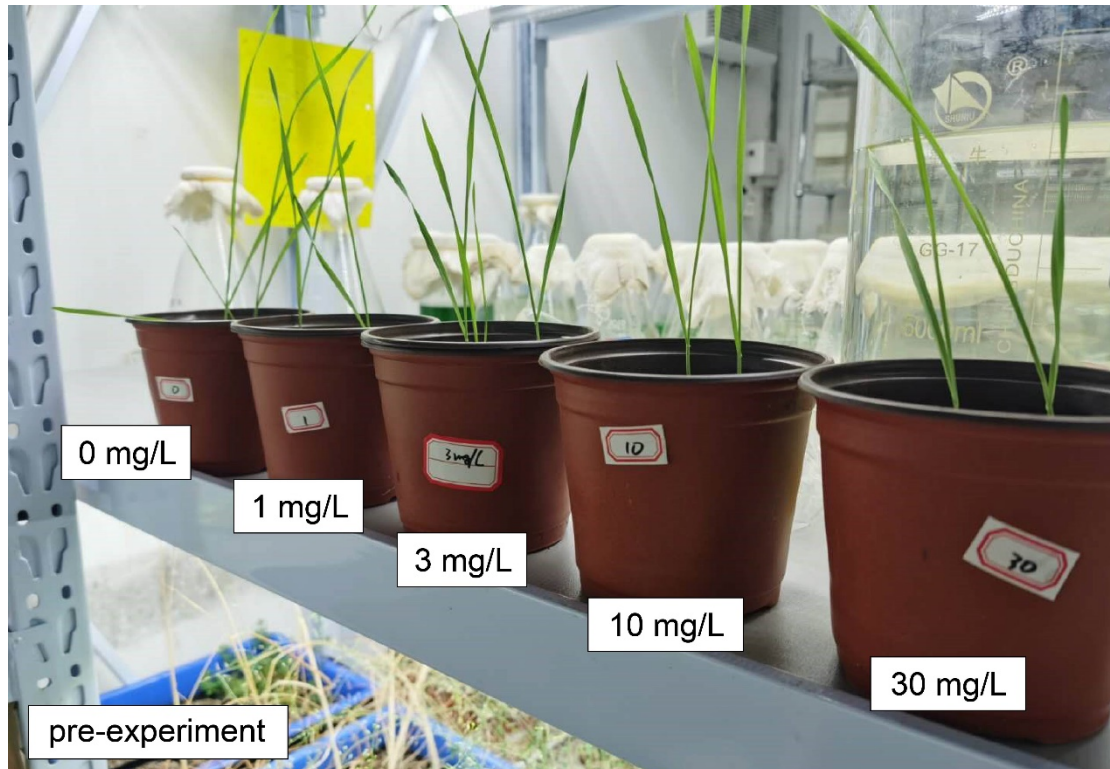


Figure S1. Picture of wheat growing under different concentration of chlorine treatment. Before formal experiment, pre-experiment was carried out by using five different concentrations of chlorine treatment to observe the effect of chlorine treatment on the growth of wheat.

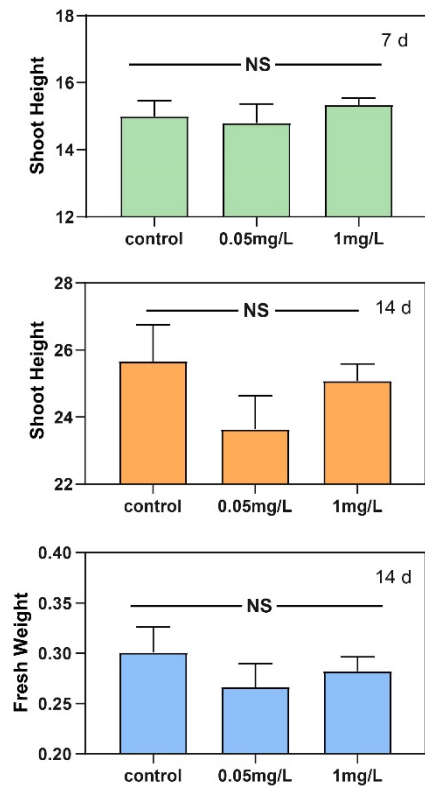


Figure S2. Shoot height and fresh weight of wheat after different concentration of chlorine treatment at 7 d and 14 d.

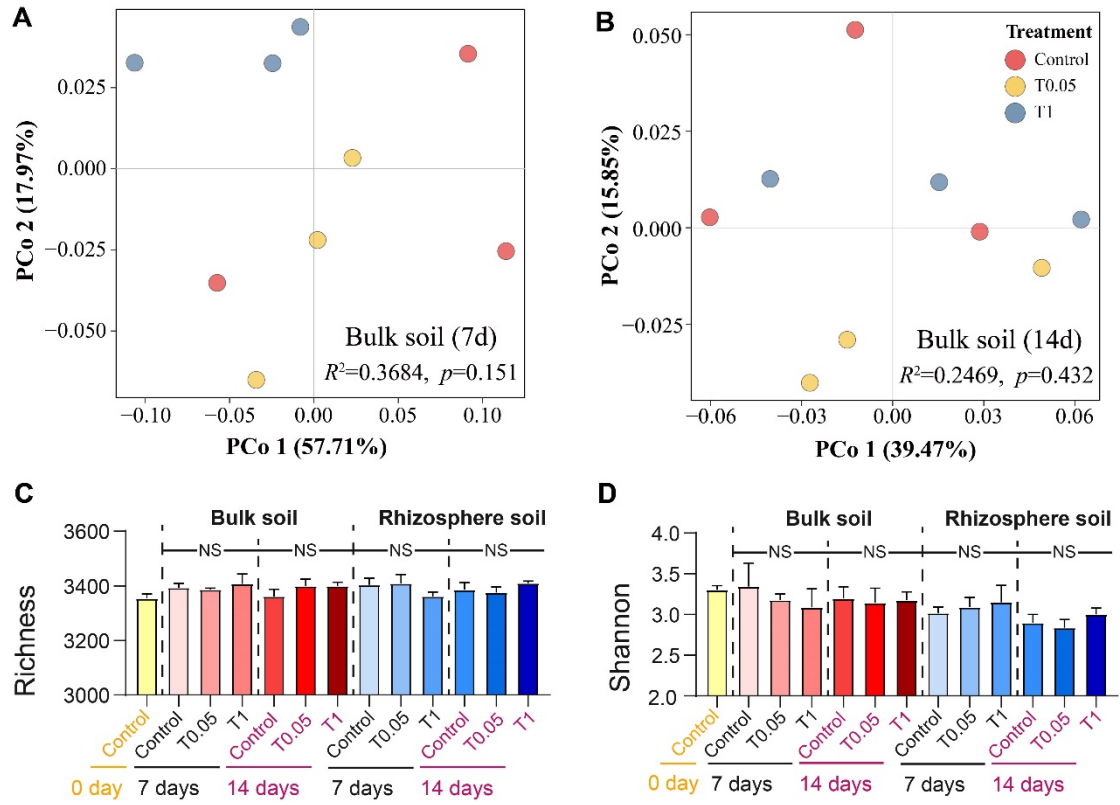


Figure S3. Changes of microbial community diversity and composition in rhizosphere and bulk soil after chlorine treatment. (A) (B) PCoA analysis of microbe genera communities using Bray-Curtis distance of different chlorine concentration treatment groups at 7 d or 14 d in bulk soil. (C) (D) Shannon and richness indices calculated with genus level based on rhizosphere and bulk soil microbiota (mean \pm SE, n=3) after 7 days or 14 days.

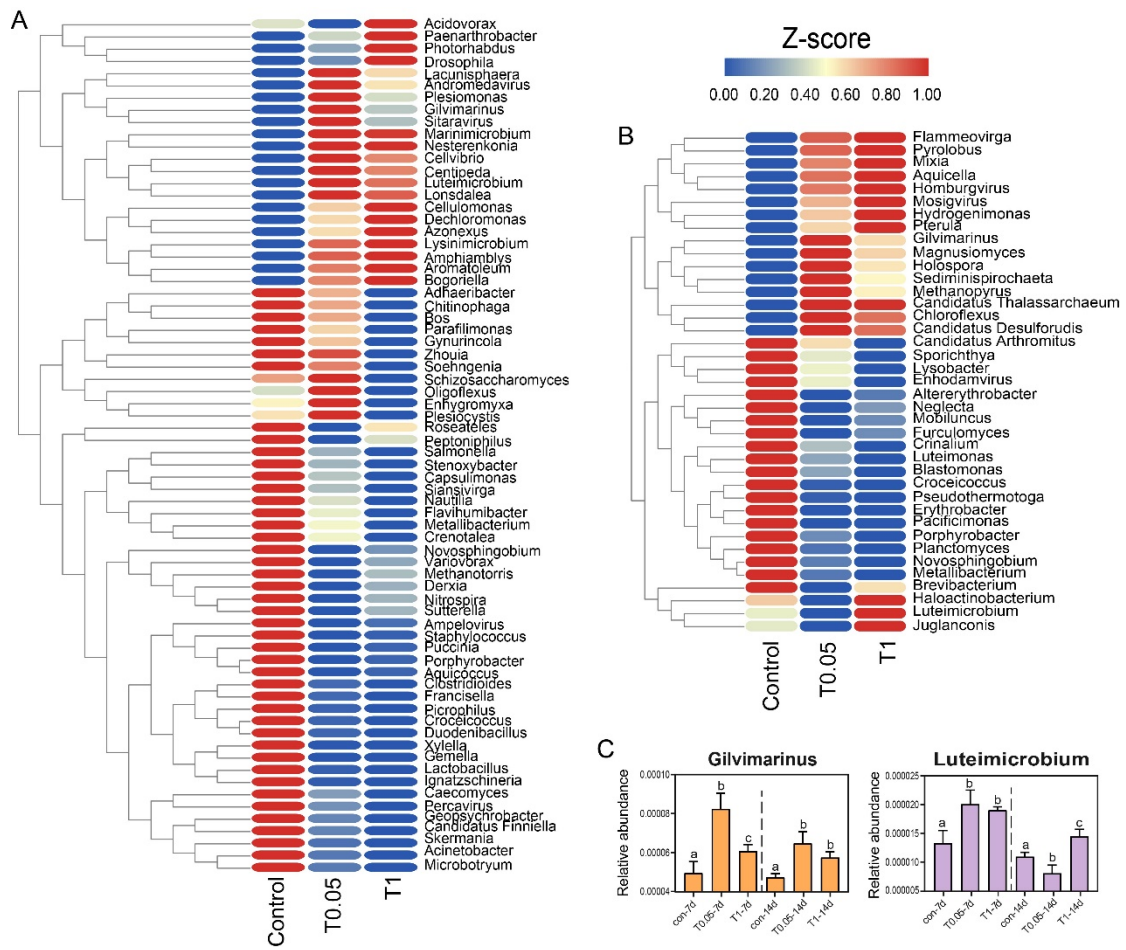


Figure S4. Significantly changed microbe genera in rhizosphere. (A)(B) Heatmap of significantly changed microbe genera at 7 d and 14 d. The relative abundance of genera is transformed to z-score. T0.05 and T1 represent 0.05 mg/L and 1 mg/L of Cl treatment, respectively. **(C)** Two significantly changed microbe genera both at 7 d and 14 d. Different letters indicate a significant difference (two-tailed T.TEST, $p < 0.05$).

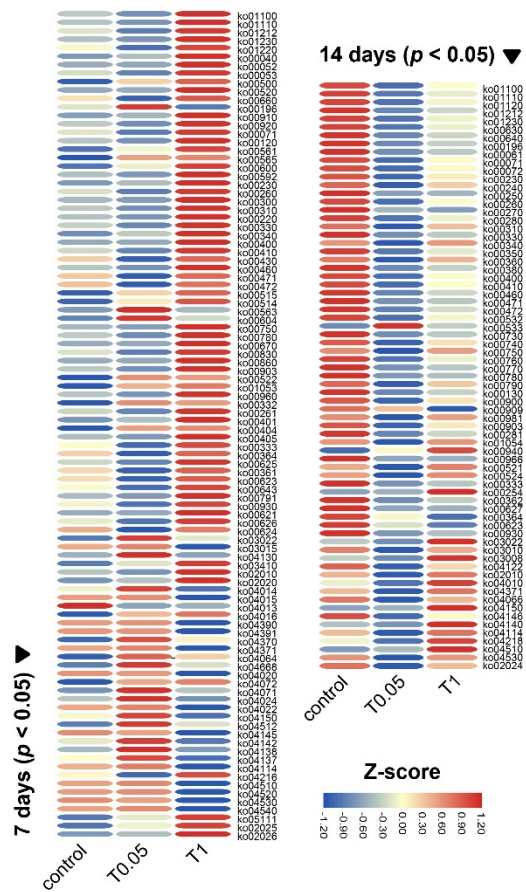


Figure S5. Heatmap of function pathways significantly changed in rhizosphere (7 d and 14 d; two-tailed T.TEST, $p < 0.05$). The value of pathways had been transformed to z-score.

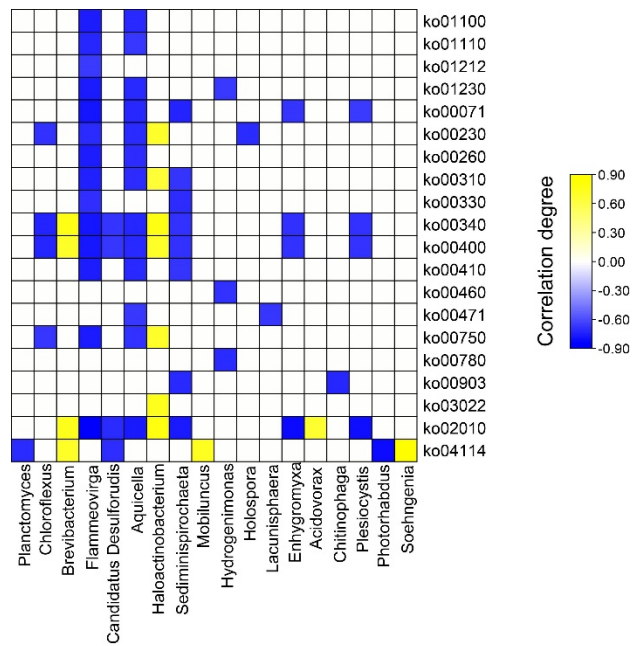


Figure S6. Heatmap of strongly correlated genera and functions. The correlation between significantly changed genera and functions was calculated based on Spearman's rank correlation coefficients. Only strong ($|r| > 0.8$) and significant ($p < 0.05$) correlation were presented. Blue and yellow cubes represented negative and positive correlation, respectively.

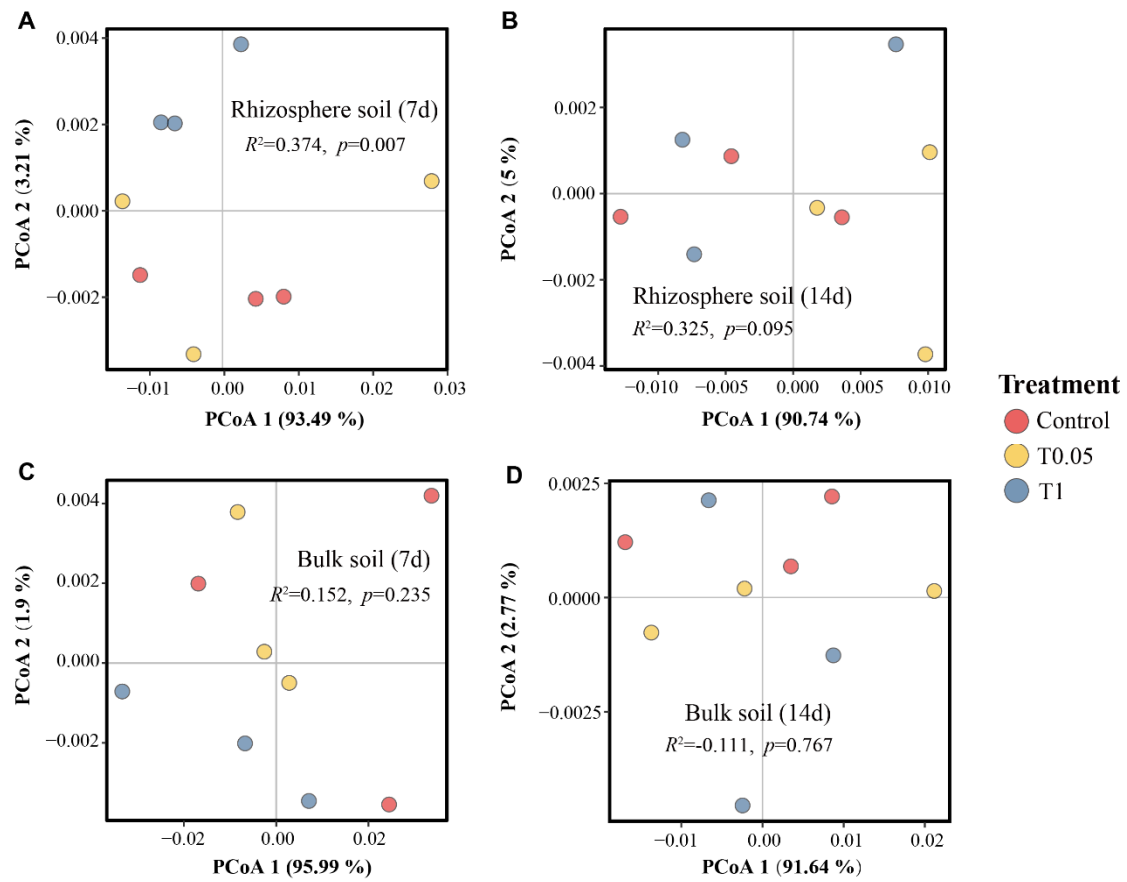


Figure S7. Changes of ARGs abundance in rhizosphere and bulk soil after different chlorine treatment. Beta diversity (PCoA analysis of abundance of ARGs using Bray-Curtis distance) of different chlorine concentration treatment groups after 7 d or 14 d.

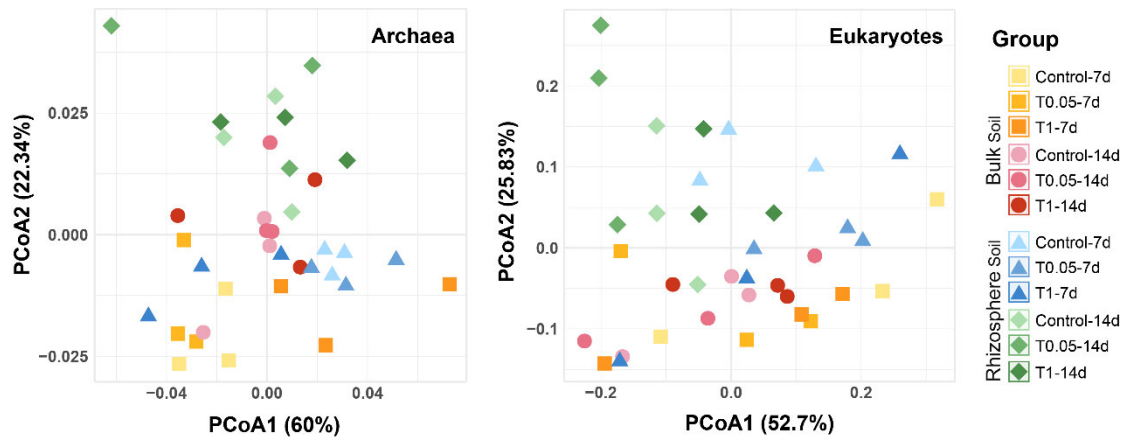


Figure S8 Effect of chlorine on archaea and eukaryotes. Principal coordinates analysis (PCoA) of archaea and eukaryotes abundance using Bray-Curtis distance.