

**Effect of freeze-thaw on a mid-temperate soil bacterial community and the correlation network of its members**

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**Running title:** FTs affect soil bacterial community

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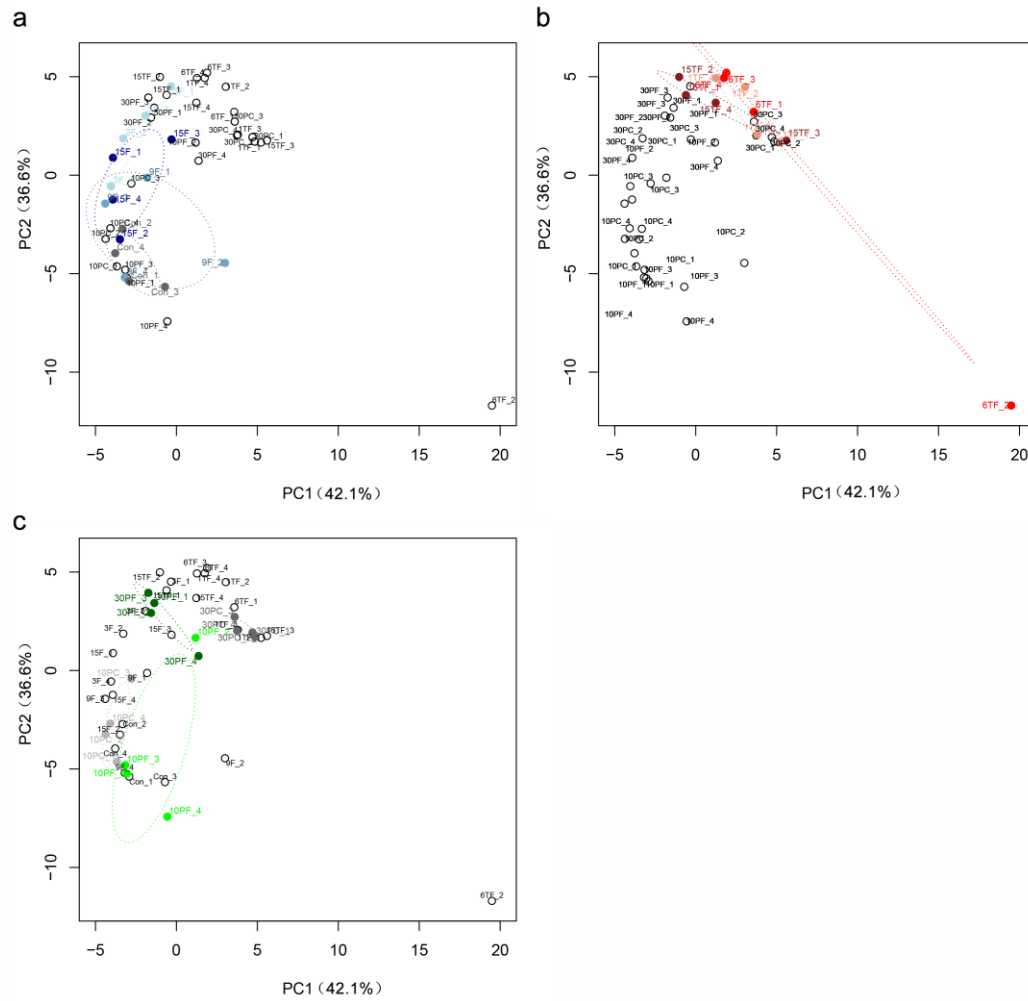


Fig. S1 Comparison of the bacterial functional profiles between different treatments in three tests. Principal coordinate analysis (PCoA) by Bray–Curtis distance matrices for the bacterial KO orthologs based on the Kyoto encyclopedia of genes and genomes (KEGG) classification in the *Amplitude test* (a), *Frequency test* (b), and *SWC test* (c). Symbols are colored by different treatments, and ellipses were drawn for each test with a confidence limit of 0.99.

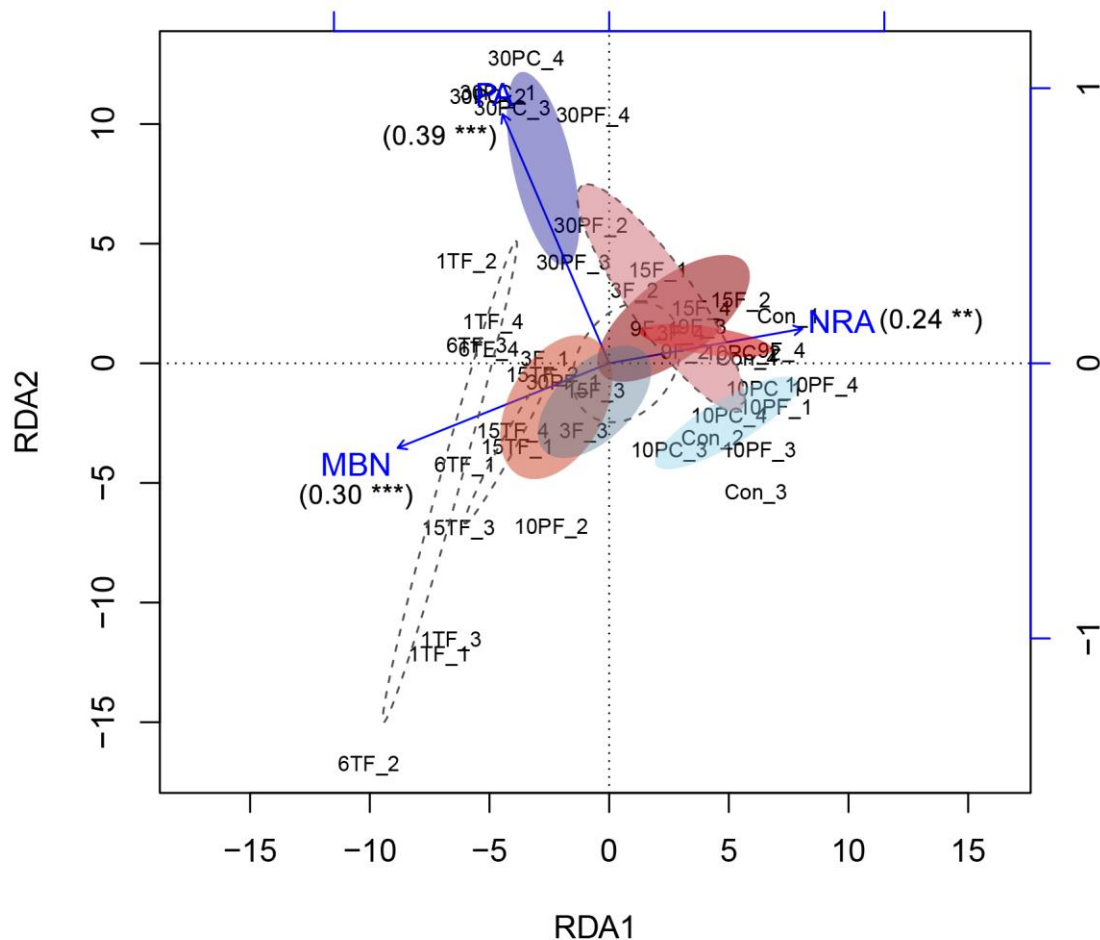


Fig. S2 Redundancy analysis (RDA) estimated the relationships between bacterial functional profiles (i.e., KO orthologs based on the Kyoto encyclopedia of genes and genomes (KEGG) classification) and bulk microbial properties (including microbial biomass and extracellular enzyme activities) across all soil samples. Ellipses are colored by different conditions (red: Amplitudes; dashed line: Frequency of freeze-thaw cycle; blue: soil water contents) and drawn for each condition with a confidence limit of 0.95.