

Supplementary Material

Figure S1 Characteristics of water microbial species composition. (A) Distribution map of OTU of petals common and unique among different groups; (B) Clustering heat map of the composition abundance of the top 35 species of the microbiota among different groups at the family level.

Figure S2 Species classification tree analysis (selected the top ten genera with the largest relative abundance).

Figure S3 Alpha diversity and beta diversity. (A) The rarefaction curve; (B) Rank abundance curve; (C) Box plot of species accumulation.

Figure S4 Differences in dominant species between the three groups of samples using a ternary plot (ternary phase diagram). (A-F) Differences in dominant species among the three groups of TW1-TW2-TW3, TW2-TW3-TW4, TW3-TW4-TW5, TW4-TW5-TW6, TW5-TW6-TW7, TW6-TW7-TW8 samples. (Selected top ten species with average abundance at the genus level among the three groups of samples).

Figure S5 Simper analysis of contribution of species to differences between groups. (Simper is a decomposition of the Bray–Curtis difference index, used to quantify each species contribution to the difference between two groups. The top ten species and their abundances that contribute to the difference between the two groups).

Figure S6 Functional predictive analysis. (A) Columnar stacked chart of functional relative abundance; (B) KEGG database annotation results.