

Supplementary Material

A red seaweed *Kappaphycus alvarezii*-based biostimulant (AgroGain®) improves growth of *Zea mays* and impacts agricultural sustainability by beneficially priming soil microbial health.

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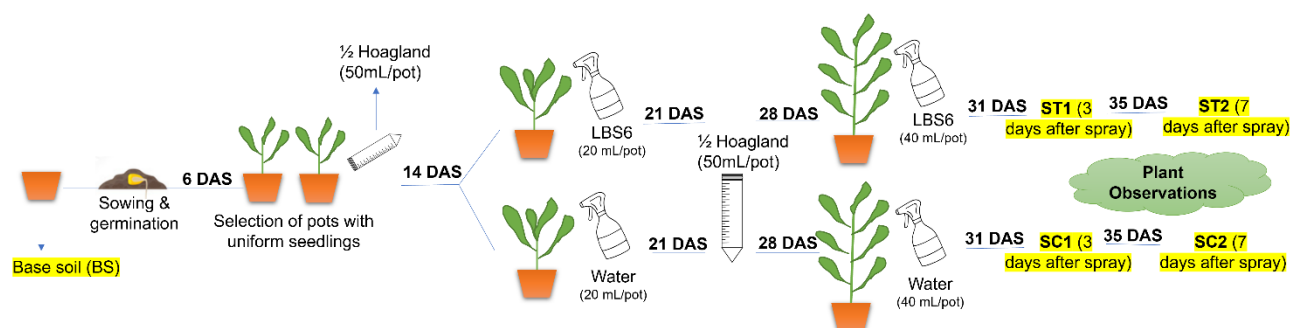
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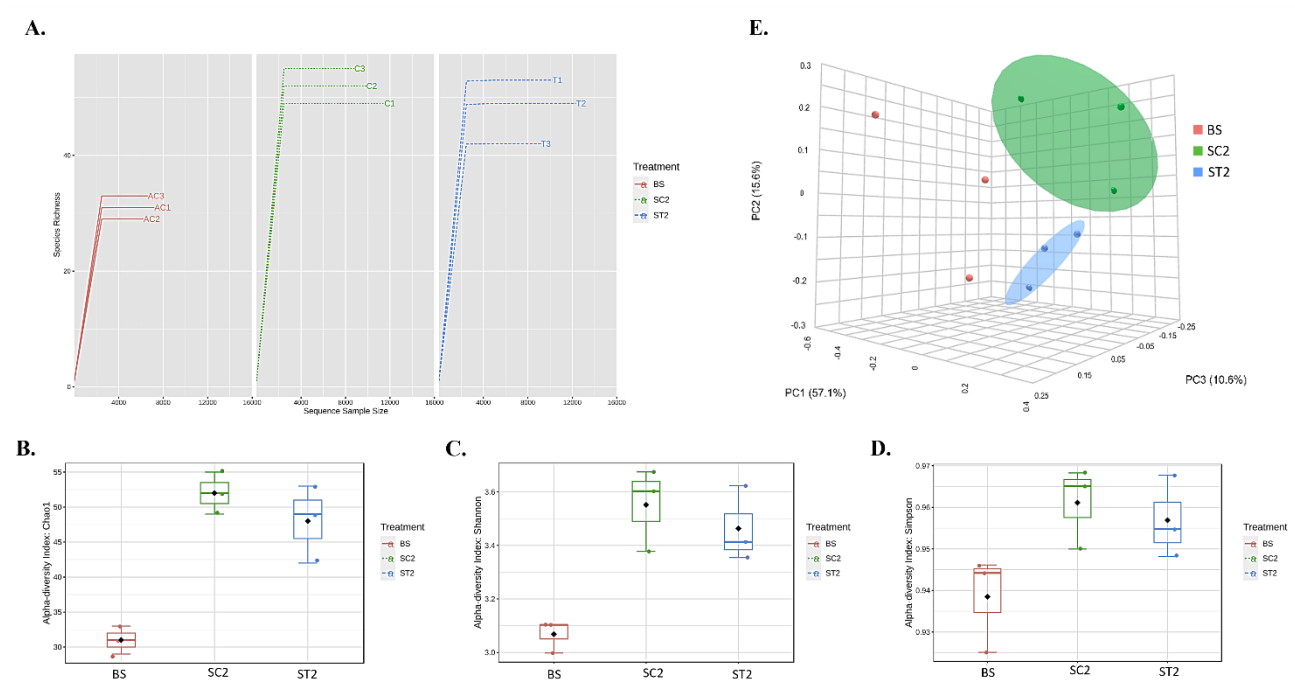
1 Supplementary Figures and Tables

1.1 Supplementary Figures

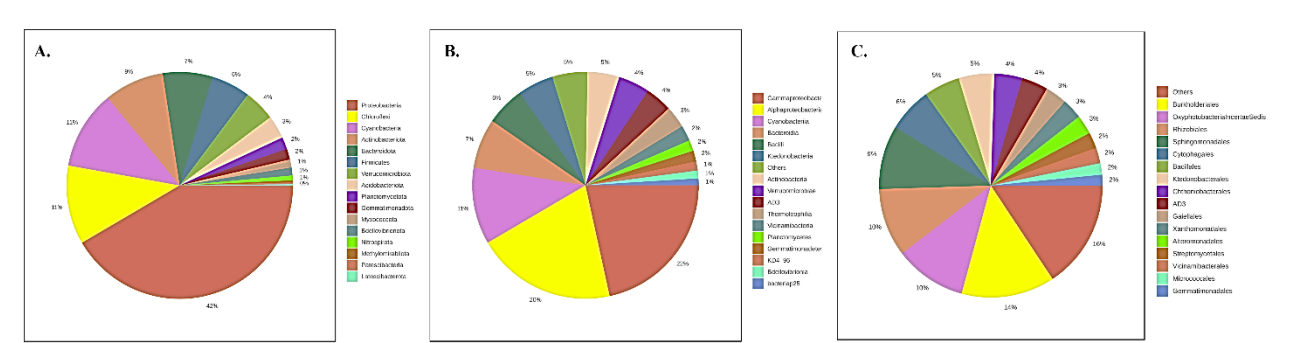
Supplementary Fig 1. Schematic representation of the experimental design with the sampling time points for plant growth and metagenomic analysis. Base soil sample (BS) was taken before sowing. Maize plants were treated with two doses of LBS6 (+ surfactant) foliar spray and sampled after three and seven days of treatment (ST1 and ST2) and water was used with surfactant for control (SC1 and SC2). BS, SC2 and ST2 samples were used for metagenomics.



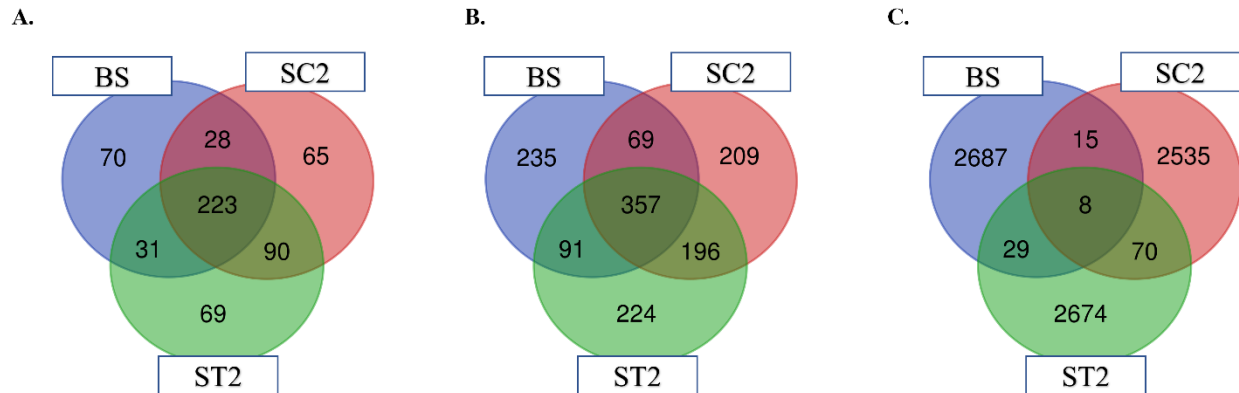
Supplementary Fig 2. Relative bacterial diversity as indicated by (A) Rarefaction curve, (B) Chao1 diversity index, (C) Shannon’s diversity index and (D) Simpson’s diversity index and (E) Beta diversity. AC1, AC2 and AC3 indicates the replicates of BS, C1, C2 and C3 indicates SC2 and T1, T2 and T3 indicates ST2.



Supplementary Fig 3. Top 16 enriched (A) Phylum, (B) Class and (C) Order categories form all samples (BS, SC2 and ST2).



Supplementary Fig 4. Venn diagram to observe the number of unique and shared taxa. (A) Family, (B) Genus and (C) OTUs.



Supplementary Fig 5. LBS6 spray induced differences in the functional profile (A) KEGG Orthologs, (B) KEGG Pathways obtained from TAX4FUN analysis.

