[Appendix](javascript:;) Table 4 Spearman's rank correlation analysis of phosphorus solubilizing ability and auxin production ability of PGPR strains with rhizosphere soil microbial diversity, soil element content and plant growth status

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Capacity of strains | Acidobacteriota | Actinomycetota | Bacteroidota | Pseudomonadota | Verrucomicrobiota | Ascomycota | Basidiomycota | Mucoromycota |
| Phosphorus | 0.825\*\* | 0.530\*\* | 0.916\*\* | -0.242 | -0.662\*\* | 0.677\*\* | -0.709\*\* | -0.518\*\* |
| Auxin | 0.692\*\* | 0.456\* | 0.863\*\* | -0.334 | -0.640\*\* | 0.613\*\* | -0.743\*\* | -0.402\* |
|  | OCC | TNC | HNC | TPHC | APHC | TPOC | APOC | - |
| Phosphorus | 0.448\* | 0.395\* | 0.082 | 0.245 | -0.083 | 0.137 | -0.128 | - |
| Auxin | 0.257 | 0.190 | -0.029 | 0.307 | 0.001 | 0.102 | -0.234 | - |
|  | Branch Number | Leaf Number | Chl | Primary Root Length | Plant Height | - | - | - |
| Phosphorus | 0.299 | 0.417\* | 0.496\*\* | 0.362\* | 0.153 | - | - | - |
| Auxin | 0.199 | 0.221 | 0.273 | 0.135 | 0.055 | - | - | - |

Phosphorus: Phosphorus- solubilizing capacity of strains used for root irrigation, Auxin: Auxin production capacity of strains used for root irrigation，OCC: organic carbon content, TNC: total nitrogen content, TPHC: total phosphorous content, TPOC: total potassium content, HNC: hydrolysable nitrogen content, APHC: available phosphorous content, and APOC: available potassium content

\* p < 0.05; \*\* p < 0.01