**Table S3.** Pearson correlation coefficients among *amoA* genes and transcripts, alpha-diversity of ammonia-oxidizing bacterial community, and soil properties.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | pH | SWC† | NH4+-N | NO3--N | DOC | DON | TOC | TN | C: N ratio | N2O-N | NP | *amoA* gene | *amoA* transcript |
| *amoA* gene | -0.303\* | -0.792\*\* | -0.471\*\* | -0.066 | 0.477\*\* | 0.445\*\* | 0.173 | 0.273 | -0.241 | -0.322\* | 0.530\*\* | 1 | -0.215 |
| *amoA* transcript | 0.067 | 0.561\*\* | 0.448\*\* | 0.339\* | -0.640\*\* | -0.110 | 0.042 | 0.059 | -0.050 | 0.228 | 0.005 | -0.215 | 1 |
| Chao1 estimator | -0.234 | -0.190 | -0.114 | 0.079 | 0.056 | 0.176 | 0.068 | 0.018 | 0.129 | -0.221 | 0.235 | 0.402\*\* | 0.070 |
| Observed OTUs | -0.352\* | -0.195 | -0.085 | 0.359\* | -0.080 | 0.356\* | 0.028 | 0.082 | -0.124 | -0.036 | 0.531\*\* | 0.552\*\* | 0.124 |
| Shannon index | -0.569\*\* | -0.014 | 0.161 | 0.624\*\* | -0.264 | 0.114 | 0.269 | 0.290\* | -0.065 | 0.280 | 0.514\*\* | 0.309\* | 0.207 |
| Pielou’s evenness | -0.585\*\* | 0.040 | 0.225 | 0.652\*\* | -0.295\* | 0.046 | 0.316\* | 0.328\* | -0.047 | 0.349\* | 0.471\*\* | 0.217 | 0.220 |

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

†SWC, soil water content; DOC, dissolved organic C; DON, dissolved organic N; TOC, total organic C; TN, total N; NP, nitrification potential.