Supplementary Information

**N2O fluxes and related processes of denitrification in acidified soil**

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Figure S1 NH+ 4-N and NO- 3-N concentrations in soil. Error bars show one standard deviation (n = 4).



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Table S1 Fraction of fungal denitrification derived N2O to total N2O (*f*FD) in samples

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **treatment** | **Glucose**  **level** | **Approach** | *f*FD | | | | | | | |
| **day 1** | **day 2** | **day 3** | **day 5** | **day 7** | **day 9** | **day 12** | **day 15** |
| pH 6.2 | 0C | calculated | 0.65 | 0.66 | 0.59 | 0.48 | 0.53 | 0.31 | 0.50 | 0.41 |
| 0C | measured | 0.66 | 0.51 | 0.45 | 0.29 | 0.31 | 0.24 | 0.43 | 0.38 |
| 300C | calculated | 0.25 | 0.38 | 0.33 | 0.70 | 0.76 | 0.54 | 0.72 | 0.52 |
| 300C | measured | 0.42 | 0.34 | 0.40 | 0.46 | 0.49 | 0.53 | 0.60 | 0.50 |
|  |  |  |  |  |  |  |  |  |  |  |
| pH 7.1 | 0C | calculated | 0.69 | 0.67 | 0.62 | 0.44 | 0.43 | 0.37 | 0.44 | 0.45 |
| 0C | measured | 0.50 | 0.54 | 0.45 | 0.35 | 0.36 | 0.31 | 0.37 | 0.36 |
| 300C | calculated | 0.25 | 0.33 | 0.31 | 0.29 | 0.61 | 0.41 | 0.60 | 0.37 |
| 300C | measured | 0.43 | 0.38 | 0.33 | 0.64 | 0.54 | 0.29 | 0.41 | 0.33 |
|  |  |  |  |  |  |  |  |  |  |  |
| pH 8.7 | 0C | calculated | 0.54 | 0.54 | 0.43 | 0.44 | 0.42 | 0.43 | 0.46 | 0.40 |
| 0C | measured | 0.36 | 0.48 | 0.36 | 0.39 | 0.35 | 0.33 | 0.33 | 0.34 |
| 300C | calculated | 0.23 | 0.37 | 0.27 | 0.42 | 0.44 | 0.37 | 0.39 | 0.40 |
| 300C | measured | 0.38 | 0.29 | 0.32 | 0.57 | 0.42 | 0.34 | 0.41 | 0.37 |