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# Nitrogen input $^{15}N$ signatures are reflected in plant $^{15}N$ natural abundances in subtropical forests in China

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Table S1. Mean concentration (mg N/L) of $NH_4^+$-N and $NO_3^-$-N in precipitation, throughfall, surface runoff and soil solution below 20 cm sampled from September 2012 to February 2013. Numbers in parenthesis for throughfall and soil solution indicate standard error of the mean (SE) ($n$ = 3).

| Fluxes | Broad-leaved forest (BF) | | | Pine forest (PF) | | |
|---|---|---|---|---|---|---|
| | NH4+-N | $NO_3^-$-N | DIN | $NH_4^+$-N | $NO_3^-$-N | DIN |
| Precipitation* | 2. 9 | 1.2 | 4.1 | 2. 9 | 1.2 | 4.1 |
| Throughfall | 4.3 (0.6) | 2.6 (0.3) | 7.0 (0.8) | 4.4 (0.4) | 2.0 (0.3) | 6.4 (0.6) |
| Surface runoff | 2.5 (0.5) | 4.4 (0.3) | 6.8 (0.2) | 5.1 (1.2) | 5.2 (1.0) | 10.2 (0.3) |
| Soil solution | 2.0 (0.2) | 7.4 (1.2) | 9.4 (1.2) | 2.7 (0.4) | 5.2 (0.3) | 7.8 (0.6) |

*Precipitation was collected at open area within the reserve, and was assumed to be the same for both forests

Table S2. Canculation of the amount of added N incoporated into plant N pools in the broad-leaved (BF) and pine forest (PF).

Mass balance formula (Nadelhoffer and Fry, 1994)

$$^{15}N_{rec} = m_{pool}(\text{atom } \%^{15}N_{pool} - \text{atom } \%^{15}N_{ref}) \div (\text{atom } \%^{15}N_{tracer} - \text{atom } \%^{15}N_{ref})$$

$^{15}N_{rec}$ = % of added N recovered

$m_{pool}$ = N pool in N plots

atom $\%^{15}N_{pool}$ = delta $^{15}N$ in N-plots

atom $\%^{15}N_{ref}$ = delta $^{15}N$ in control

atom $\%^{15}N_{tracer}$ = delta $^{15}N$ of added N

| Forest type | Control | N-plot | N pool in N-plots (kg/ha) | Total mass of added (kg/ha) | delta $^{15}N$ of added N | Amount of added N recovered (kg/ha) | % of added recovered |
|---|---|---|---|---|---|---|---|
| BF | -3.92 | -3.25 | 372.37 | 500 | -0.71 | 76.74 | 15.3 |
| PF | -5.30 | -3.61 | 228.73 | | | 72.93 | 14.6 |