Supplement of

# Tropical dry forest response to nutrient fertilization: a model validation and sensitivity analysis 

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## Supplement

Supplement Table S1. Validation of simulated leaf production for 63 parameter settings. Validation was done separately for: (i) the collection of control and $+\mathbf{N}$ plots, and (ii) the collection of $+\mathbf{P}$ and $+\mathbf{N P}$ plots. If the model and observations had a statistically significant difference ( $p<0.05$ ) for the control and +N plots, "CN" is entered in the table. If differences were found for the +P and +NP plots, "PNP" was entered in the table. The notation "-" indicates that no significant differences were found for either set of plots.

| Leaf Production | $\mathrm{a}=0$ | $\mathrm{a}=0.1$ | $a=0.2$ | $\mathrm{a}=0.3$ | $\mathrm{a}=0.4$ | $\mathrm{a}=0.5$ | $\mathrm{a}=0.6$ | $a=0.7$ | $\mathrm{a}=0.8$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $b=-60$ | - | - | - | - | - | - | - | - | NPN |
| $b=-40$ | - | - | - | - | - | - | - | - | - |
| $b=-20$ | - | - | - | - | - | - | - | - | - |
| $\mathrm{b}=0$ | - | - | - | - | - | - | - | - | - |
| $\mathrm{b}=20$ | - | - | - | - | - | - | - | - | - |
| $\mathrm{b}=40$ | - | - | - | - | - | - | - | - | - |
| $b=60$ | NPN | NPN | NPN | - | - | - | - | - | CN |

Supplement Table S2. As for Supplement Table S1, but for wood production.

| Wood Production | $\mathrm{a}=0$ | $\mathrm{a}=0.1$ | $\mathrm{a}=0.2$ | $\mathrm{a}=0.3$ | $\mathrm{a}=0.4$ | $\mathrm{a}=0.5$ | $\mathrm{a}=0.6$ | $\mathrm{a}=0.7$ | $\mathrm{a}=0.8$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathrm{b}=-60$ | PNP | PNP | PNP | PNP | PNP | - | - | - | - |
| $\mathrm{b}=-40$ | PNP | PNP | PNP | PNP | - | - | - | - | - |
| $b=-20$ | PNP | PNP | PNP | PNP | - | - | - | - | - |
| $\mathrm{b}=0$ | PNP | PNP | PNP | PNP | PNP | PNP | - | - | - |
| $b=20$ | - | - | CN | - | - | - | - | - | - |
| $b=40$ | - | CN | - | - | - | - | - | - | - |
| $b=60$ | - | - | - | - | - | - | - | - | - |

Supplement Table S3. As for Table 1, but for fine root production.

| Fine | Root | $\mathbf{a}=\mathbf{0}$ | $\mathbf{a}=\mathbf{0 . 1}$ | $\mathbf{a}=\mathbf{0 . 2}$ | $\mathbf{a}=\mathbf{0 . 3}$ | $\mathbf{a}=\mathbf{0 . 4}$ | $\mathbf{a}=\mathbf{0 . 5}$ | $\mathbf{a}=\mathbf{0 . 6}$ | $\mathbf{a}=\mathbf{0 . 7}$ | $\mathbf{a}=\mathbf{0 . 8}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Production |  |  |  |  |  |  |  |  |  |  |
| $\mathbf{b = - 6 0}$ | $C N, P N P$ | $C N, P N P$ | $C N, P N P$ | $C N, P N P$ | $C N, P N P$ | $P N P$ | $P N P$ | $C N, P N P$ | $C N, P N P$ |  |
| $\mathbf{b}=\mathbf{- 4 0}$ | $C N, P N P$ | $C N, P N P$ | $C N, P N P$ | $C N, P N P$ | $C N, P N P$ | $P N P$ | $P N P$ | $C N, P N P$ | $C N$ |  |
| $\mathbf{b}=\mathbf{- 2 0}$ | $C N, P N P$ | $C N, P N P$ | $C N, P N P$ | $C N, P N P$ | $C N, P N P$ | $P N P$ | $P N P$ | $C N$ | $C N$ |  |
| $\mathbf{b}=\mathbf{0}$ | $C N, P N P$ | $C N, P N P$ | $C N, P N P$ | $C N, P N P$ | $C N, P N P$ | $P N P$ | $P N P$ | $C N$ | $C N$ |  |
| $\mathbf{b}=\mathbf{2 0}$ | $C N, P N P$ | $C N, P N P$ | $C N, P N P$ | $C N, P N P$ | - | - | $C N$ | $C N, P N P$ | $C N, P N P$ |  |
| $\mathbf{b}=\mathbf{4 0}$ | $C N, P N P$ | $C N$ | $C N$ | - | $P N P$ | $P N P$ | $C N, P N P$ | $C N, P N P$ | $C N, P N P$ |  |
| $\mathbf{b}=\mathbf{6 0}$ | $C N$ | $C N, P N P$ | $P N P$ | $P N P$ | $P N P$ | $C N, P N P$ | $C N, P N P$ | $C N, P N P$ | $C N, P N P$ |  |

