

TABLE 2. Initial conditions and parameter values. Units are as described in Table 1. Multiple entries for individual parameters and fluxes indicate values used in different simulations. NA indicates not applicable.

Carbon		Nitrogen		Other		
Term	Value	Term	Value	Term	Value	
A) Initial state variables						
E_C	350†	E_N	1			
B_C	22000	B_N	110			
D_C	13000	D_N	521			
V_C	0.5	V_N	0.5			
B) Initial fluxes						
R_{Ce}	NA	R_{Ne}	0, 1, NA			
R_{Cm}	452	R_{Nm}	17.68‡			
R_{Cv}	452	R_{Nv}	2.151			
U_{Cm}	0	U_{Nm}	8.872‡			
U_{Cv}	904	U_{Nv}	10.96			
L_{Cv}	452	L_{Nv}	8.809			
L_{Ce}	NA	L_{Ne}	0, 1, NA			
L_{Cd}	0	L_{Nd}	0			
C) Parameters						
g_C	1116	g_N	23.77	a	5	
r_C	0.02055	r_N	0.01955	τ	3	
m_C	0.02055	m_N	0.08009	q_{wood}	439	
k_C	350†	k_N	5	k_q	26290	
z_C	0.11	z_N	0.16			
ε_C	0.6	ε_N	0.6471‡	θ	8.628‡	
α_C	0	α_N	0.01092‡	ψ	0.04321	
k_{Cm}	NA	k_{Nm}	1			
β_{Ce}	NA	β_{Ne}	0, 1, NA	β_d	0	
D) Parameter values and initial flux rates‡						
Net/gross	α_N	θ	ε_N	Λ_N	R_{Nm}	U_{Nm}
1.000	0	12.03	0.9021	0.6087	8.809	0
0.4982	0.01092	8.628	0.6471	0.4366	17.68	8.872
0.2007	0.02354	4.701	0.3525	0.2379	43.90	35.09

† For convenience, units for E_C and k_C are mL/m³ rather than g/m². Because E_C is specified directly throughout the simulations, it is only used in Eq. 13 within the dimensionless quantity $E_C/(k_C + E_C)$. Because this quantity is dimensionless, any units can be used for E_C as long as they are the same as those used for k_C .

‡ Values for these initial fluxes and parameters were varied to examine ecosystem sensitivity to differences in the initial ratio of net to gross N mineralization (i.e., $[R_{Nm} - U_{Nm}]/R_{Nm}$). Parameter values and initial flux rates associated with each of the three ratios of net to gross mineralization used in the analysis are shown in part D.