

Table S1. Correlations between nitrogen deposition rates (x) and community characteristics (y).

	Cover (%)	Species number	Aboveground biomass (g m ⁻²)	Belowground biomass (g m ⁻²)	R/S
N addition	$R^2 = 0.906$	$R^2 = 0.963$	$R^2 = 0.903$	$R^2 = 0.856$	$R^2 = 0.824$
rates	$P = 0.032$	$P = 0.111$	$P = 0.180$	$P = 0.219$	$P = 0.061$

Table S2. Correlations between nitrogen deposition rates (x) and vegetation TC, TN and TP
(shoots and roots, y)

		TC	TN	TP
N addition rates	Shoots	$R^2 = 0.753$	$R^2 = \mathbf{0.851}$	$R^2 = \mathbf{0.934}$
		$P = 0.287$	$P = \mathbf{0.050}$	$P = \mathbf{0.022}$
	Roots	$R^2 = 0.639$	$R^2 = \mathbf{0.948}$	$R^2 = \mathbf{0.999}$
		$P = 0.347$	$P = \mathbf{0.017}$	$P < \mathbf{0.001}$

Table S3. Correlations between nitrogen deposition rates (x) and soil property (y)

		pH	DOC	NO ₃ ⁻ -N	NH ₄ ⁺ -N	TC	TN	TP
N addition rates	Rhizosphere	$R^2 = 0.451$	$R^2 = 0.961$	$R^2 = 0.889$	$R^2 = 0.675$	$R^2 = 0.605$	$R^2 = 0.416$	$R^2 = 0.942$
		$P = 0.428$	$P = 0.113$	$P = 0.038$	$P = 0.330$	$P = 0.363$	$P = 0.441$	$P = 0.140$
	Bulk	$R^2 = 0.903$	$R^2 = 0.959$	$R^2 = 0.977$	$R^2 = 0.878$	$R^2 = 0.749$	$R^2 = 0.784$	$R^2 = 0.850$
		$P = 0.033$	$P = 0.014$	$P = 0.008$	$P = 0.202$	$P = 0.087$	$P = 0.075$	$P = 0.051$

Table S5. Correlations between soil (rhizosphere and bulk, x) and vegetation C:N, C:N and N:P (shoots and roots, y).

		Shoots			Roots		
		C:N	C:P	N:P	C:N	C:P	N:P
Rhizosphere soil	C:N	$R^2 = 0.579$ $P = 0.152$			$R^2 = -0.463$ $P = 0.844$		
	C:P		$R^2 = -0.443$ $P = 0.804$			$R^2 = -0.008$ $P = 0.422$	
	N:P			$R^2 = -0.257$ $P = 0.597$			$R^2 = -0.377$ $P = 0.713$
Bulk soil	C:N	$R^2 = 0.383$ $P = 0.233$			$R^2 = -0.383$ $P = 0.721$		
	NO₃⁻-N		$R^2 = -0.376$ $P = 0.713$			$R^2 = -0.493$ $P = 0.933$	
	N:P			$R^2 = -0.386$ $P = 0.724$			$R^2 = -0.286$ $P = 0.622$