

## Supplementary material III-S10

### Model

```
model = '  
Soil.C.2018 ~ Soil.C.2010 +  
            CURV_PR +  
            CN.litterfall + ENL +  
            TSP.RD + RD + mic.bio  
  
Soil.C.2010 ~ SLOPE + CURV_PL  
  
ENL ~ Sp.rich + SLOPE + CURV_PL + CURV_PR  
  
mic.bio ~ ENL + TSP.SRL + TSP.RD + FDis.SRL + RD + Soil.C.2018  
'
```

## Results

### Explained variance

Variable	R-squared (%)
Soil.C.2018	28.9
Soil.C.2010	10.8
ENL	34.5
mic.bio	47.7

### Grouped summary

Relation	Effect size
Mic. biomass ~ Neighbors root traits	0.2847093
Mic. biomass ~ Soil C 2018	0.5058328
Mic. biomass ~ TSP root traits	0.4384361
Mic. biomass ~ Mic. biomass	0.1346658
Neighbors aboveground productivity & traits ~ Topography	0.5162879
Neighbors aboveground productivity & traits ~ Tree species richness	0.2479654
Neighbors aboveground productivity & traits ~ Neighbors aboveground productivity & traits	0.1626817
Soil C 2010 ~ Topography	0.5325641
Soil C 2010 ~ Soil C 2010	0.2215195
Soil C 2018 ~ Neighbors aboveground productivity & traits	0.4067151
Soil C 2018 ~ Soil C 2010	0.2474918
Soil C 2018 ~ Soil C 2018	0.1807433

## Full summary

Response	Operator	Explanatory	Estimate	SE	p-value
Soil.C.2018	~	Soil.C.2010	0.2474918	0.0770108	0.0013102
Soil.C.2018	~	CURV_PL	0.1434109	0.0833647	0.0853808
Soil.C.2018	~	CN.litterfall	-0.1886355	0.0801345	0.0185733
Soil.C.2018	~	ENL	0.2180795	0.0910763	0.0166444
Soil.C.2018	~	TSP.RD	0.1215180	0.0916470	0.1848610
Soil.C.2018	~	RD	-0.2336665	0.1279800	0.0678796
Soil.C.2018	~	mic.bio	0.1170902	0.2045576	0.5670461
Soil.C.2010	~	SLOPE	0.1753612	0.0830657	0.0347624
Soil.C.2010	~	CURV_PL	0.3572028	0.0830657	0.0000171
ENL	~	Sp.rich	0.2479654	0.0687963	0.0003129
ENL	~	SLOPE	0.2151080	0.0723778	0.0029585
ENL	~	CURV_PL	-0.1897739	0.0971164	0.0506911
ENL	~	CURV_PR	0.3011799	0.1008265	0.0028163
mic.bio	~	ENL	0.1037488	0.0636897	0.1033191
mic.bio	~	TSP.SRL	0.2098794	0.0797900	0.0085285
mic.bio	~	TSP.RD	0.2285567	0.0947419	0.0158473
mic.bio	~	FDis.SRL	-0.0949518	0.0629932	0.1317253
mic.bio	~	RD	-0.2847093	0.0819990	0.0005164
mic.bio	~	Soil.C.2018	0.5058328	0.1446843	0.0004721
Soil.C.2018	~~	Soil.C.2018	0.1807433	0.0447773	0.0000543
Soil.C.2010	~~	Soil.C.2010	0.2215195	0.0252445	0.0000000
ENL	~~	ENL	0.1626817	0.0185393	0.0000000
mic.bio	~~	mic.bio	0.1346658	0.0160947	0.0000000
CURV_PL	~~	CURV_PL	0.2483766	0.0000000	NA
CURV_PL	~~	CN.litterfall	0.0176342	0.0000000	NA
CURV_PL	~~	TSP.RD	-0.0364343	0.0000000	NA
CURV_PL	~~	RD	-0.0332459	0.0000000	NA
CURV_PL	~~	SLOPE	-0.0995559	0.0000000	NA
CURV_PL	~~	Sp.rich	0.0228885	0.0000000	NA
CURV_PL	~~	CURV_PR	-0.1797195	0.0000000	NA
CURV_PL	~~	TSP.SRL	0.0113570	0.0000000	NA
CURV_PL	~~	FDis.SRL	-0.0351465	0.0000000	NA
CN.litterfall	~~	CN.litterfall	0.2483766	0.0000000	NA
CN.litterfall	~~	TSP.RD	-0.0382589	0.0000000	NA
CN.litterfall	~~	RD	-0.0754086	0.0000000	NA
CN.litterfall	~~	SLOPE	0.0082185	0.0000000	NA
CN.litterfall	~~	Sp.rich	-0.0201507	0.0000000	NA
CN.litterfall	~~	CURV_PR	-0.0147584	0.0000000	NA
CN.litterfall	~~	TSP.SRL	-0.0594828	0.0000000	NA
CN.litterfall	~~	FDis.SRL	-0.0380842	0.0000000	NA
TSP.RD	~~	TSP.RD	0.2483766	0.0000000	NA
TSP.RD	~~	RD	0.1472590	0.0000000	NA
TSP.RD	~~	SLOPE	0.0013656	0.0000000	NA
TSP.RD	~~	Sp.rich	0.0031850	0.0000000	NA
TSP.RD	~~	CURV_PR	0.0277585	0.0000000	NA
TSP.RD	~~	TSP.SRL	-0.1526118	0.0000000	NA

(continued)

Response	Operator	Explanatory	Estimate	SE	p-value
TSP.RD	~~	FDis.SRL	0.0417814	0.0000000	NA
RD	~~	RD	0.2483766	0.0000000	NA
RD	~~	SLOPE	0.0009270	0.0000000	NA
RD	~~	Sp.rich	0.0146583	0.0000000	NA
RD	~~	CURV_PR	0.0575185	0.0000000	NA
RD	~~	TSP.SRL	-0.0763342	0.0000000	NA
RD	~~	FDis.SRL	0.0557553	0.0000000	NA
SLOPE	~~	SLOPE	0.2483766	0.0000000	NA
SLOPE	~~	Sp.rich	-0.0167863	0.0000000	NA
SLOPE	~~	CURV_PR	0.1002248	0.0000000	NA
SLOPE	~~	TSP.SRL	0.0101562	0.0000000	NA
SLOPE	~~	FDis.SRL	-0.0000568	0.0000000	NA
Sp.rich	~~	Sp.rich	0.2483766	0.0000000	NA
Sp.rich	~~	CURV_PR	-0.0686821	0.0000000	NA
Sp.rich	~~	TSP.SRL	0.0098234	0.0000000	NA
Sp.rich	~~	FDis.SRL	0.0794879	0.0000000	NA
CURV_PR	~~	CURV_PR	0.2483766	0.0000000	NA
CURV_PR	~~	TSP.SRL	-0.0123199	0.0000000	NA
CURV_PR	~~	FDis.SRL	-0.0095466	0.0000000	NA
TSP.SRL	~~	TSP.SRL	0.2483766	0.0000000	NA
TSP.SRL	~~	FDis.SRL	0.0212875	0.0000000	NA
FDis.SRL	~~	FDis.SRL	0.2483766	0.0000000	NA