

Table S1 - Enzymes included in the study, abbreviations, corresponding MUF^a substrates and final substrate concentrations.

Enzyme	Abbreviations	EC ^b	Substrate	Concentration (μ M)
β -1,4-cellobiosidase	β -cell	3.2.1.91	4-MUF- β -D-cellobioside	100
β -1,4-glucosidase	β -glu	3.2.1.21	4-MUF- β -D-glucoside	200
α -1,4-glucosidase	α -glu	3.2.1.20	4-MUF- α -D-glucoside	500
β -1,4-xylosidase	β -xyl	3.2.1.37	4-MUF- β -D-xyloside	500
<i>N</i> -acetyl- β - glucosaminidase	NAG	3.2.1.30	4-MUF- <i>N</i> -acetyl- β -D- glucosamide	200
Arylsulfatase	AS	3.1.6.1	4-MUF-sulfate	2000
Phosphodiesterase	PDE	3.1.4.1	bis-4-MUF-phosphate	200
Phosphomonoesterase	PME	3.1.3.2	4-MUF-phosphate	500

^aMUF = 4-methylumbelliferone

^bEC = enzyme code number defined by the Nomenclature Committee of the International Union of Biochemistry and Molecular Biology (NC-IUBMB)

Table S2– Correlation matrix of the main soil properties measured: soil organic carbon (SOC), total nitrogen (N), available phosphorus (P_{Olsen}), microbial biomass carbon (MBC), microbial biomass nitrogen (MBN), extractable carbon (C_{ext}), extractable nitrogen (N_{ext}), fluoresceine diacetate activity (FDA) and the activities of β -cellobiosidase (β -cell), β -glucosidase (β -glu), α -glucosidase (α -glu), β -xylosidase (β -xyl), N-acetyl- β -glucosaminidase (NAG), arylsulfatase (AS), phosphodiesterase (PDE), and phosphomonoesterase (PME). Pearson's product moment correlation coefficients (r) and significance of the associations (* $P \leq 0.05$; ** $P \leq 0.01$; *** $P \leq 0.001$) are reported.

	SOC	TN	MBC	MBN	C_{ext}	N_{ext}	P_{Olsen}	FDA	β -cell	β -glu	α -glu	β -xyl	NAG	AS	PDE
SOC	1														
TN	0.97***	1													
MBC	0.94***	0.89***	1												
MBN	0.76***	0.68**	0.79***	1											
C_{ext}	0.33	0.31	0.33	0.30	1										
N_{ext}	0.75***	0.77***	0.76***	0.41	0.66**	1									
P_{Olsen}	-0.16	-0.29	-0.06	0.19	0.11	-0.15	1								
FDA	0.87***	0.86***	0.85***	0.68**	0.43	0.81***	-0.14	1							
β -cell	0.73***	0.61**	0.71***	0.82***	0.25	0.42	0.35	0.73***	1						
β -glu	0.77***	0.66**	0.74***	0.74***	0.17	0.45	0.30	0.71***	0.94***	1					
α -glu	0.35	0.24	0.33	0.22	0.16	0.34	0.35	0.30	0.51*	0.55*	1				
β -xyl	0.40	0.28	0.40	0.56*	0.25	0.18	0.33	0.39	0.70***	0.68**	0.66**	1			
NAG	0.41	0.24	0.42	0.61**	-0.04	0.06	0.43	0.38	0.80***	0.78***	0.68**	0.79***	1		
AS	0.76***	0.68**	0.72***	0.81***	0.34	0.52*	0.18	0.76***	0.80***	0.77***	0.44	0.72***	0.57*	1	
PDE	0.56*	0.47*	0.52*	0.54*	0.22	0.42	0.18	0.60**	0.72***	0.71***	0.65**	0.78***	0.71***	0.69**	1
PME	0.13	0.14	0.12	-0.30	0.14	0.36	-0.21	0.14	-0.02	0.09	0.47*	0.27	0.04	-0.01	0.40