

Table S2. Principal component coordinates of the soil properties, based on correlations

Properties	PC 1, $\lambda = 15.2$ , 66.4 % of variance explained	PC 2, $\lambda = 2.6$ , 11.2 % of variance explained	PC 3, $\lambda = 1.3$ , 5.9 % of variance explained	PC 4, $\lambda = 1.1$ , 5.0 % of variance explained
Soil penetration resistance at the depth of the soil, cm				
0–5	0.77	0.48	–0.04	0.17
5–10	0.70	0.47	0.28	0.29
10–15	0.77	0.36	0.39	0.15
15–20	0.76	0.31	0.44	–0.03
20–25	0.81	0.25	0.31	–0.24
25–30	0.87	0.16	0.09	–0.32
30–35	0.88	0.12	–0.06	–0.32
35–40	0.89	0.08	–0.18	–0.24
40–45	0.89	0.00	–0.20	–0.14
45–50	0.91	–0.07	–0.16	0.00
50–55	0.91	–0.12	–0.12	0.07
55–60	0.94	–0.13	–0.10	0.09
60–65	0.95	–0.12	–0.07	0.07
65–70	0.95	–0.17	–0.05	0.08
70–75	0.95	–0.17	–0.04	0.06
75–80	0.94	–0.20	–0.03	0.05
80–85	0.94	–0.21	–0.03	0.03
85–90	0.93	–0.22	–0.05	0.03
90–95	0.93	–0.22	–0.05	0.02
95–100	0.56	–0.54	–0.29	0.16
Other physical properties				
EC, dSm/m	0.23	–0.55	0.68	–0.16
Litter depth, cm	–0.06	–0.73	0.34	0.50
Soil moisture, %	–0.34	–0.60	0.15	–0.58