Supplementary Table 1. Profile dissimilarity calculation – settings and promising solutions

Result	Solu-tion	Settings		The number of considered variables	The resulting number of clusters	Considered variables													
						Physical properties					Characteristic horizon					Chemical properties			
						Texture			Stone content	Bulk density									
		d	k			Sand	Silt	Clay			H	S	G	C	mC	EC	TIC	TOC	pH
1	S1	100	0	11	12	1	1	1	1	0	1	1	1	1	1	0	1	1	0
2	S2	100	0	10	12	1	1	1	1	0	1	1	1	1	1	0	0	0	1
3		200	0.01	9	11	1	1	1	1	0	1	1	1	1	0	0	1	0	0
4		100	0	8	11	1	1	1	0	0	1	1	1	1	1	0	0	0	0
5		100	0	14	10	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6		100	0	11	10	1	1	0	1	0	1	1	1	1	0	1	1	1	1
7	S3	100	0	10	10	1	1	0	1	0	1	1	1	1	0	1	1	1	0
8		100	0	8	10	1	1	1	1	0	1	1	1	1	0	0	0	0	0
9		100	0	12	9	1	1	1	1	0	1	1	1	1	1	1	0	1	1
10		100	0	11	9	1	1	1	1	0	1	1	1	1	1	1	0	1	0
11	S4	100	0	10	9	1	1	1	1	1	1	1	1	1	1	0	0	0	0
12		100	0.01	10	9	1	1	0	1	0	1	1	1	1	1	1	0	1	0
13		200	0.01	10	9	1	1	1	1	0	1	1	1	1	0	1	0	1	0
14		100	0	9	9	1	1	0	1	0	1	1	1	1	1	1	0	0	0
15		100	0	8	9	1	1	0	1	0	1	1	1	1	0	0	1	0	0
16		100	0	8	9	1	1	0	1	0	1	1	1	1	0	0	0	1	0
17		200	0.01	7	9	1	1	0	1	0	1	1	1	1	0	0	0	0	0
18	S5	100	0.01	11	8	1	1	1	1	0	1	1	1	1	1	1	0	1	0
19		100	0	10	8	1	1	1	1	0	1	1	1	1	1	1	0	0	0
20		100	0	10	8	1	1	1	1	0	1	1	1	1	1	0	0	1	0
21		100	0.01	9	8	1	1	0	1	0	1	1	1	1	1	0	0	1	0
22		100	0	7	8	1	1	0	1	0	1	1	1	1	0	0	0	0	0