

## Supplementary Material

**Table S1: Measured soil pH values (Mean and Standard deviation) at varying SMCs and soil textures 1.**

Soil texture	SMC [Mass %]	Mean, pH [Epoxy-body]	Mean, pH [Antimony]	StdDev, pH [Epoxy-body]	StdDev, pH [Antimony]
Ss	0	4	4.33	0.08	0.06
	2.91	4.2	4.48	0.05	0.05
	5.79	4.4	4.57	0.03	0.03
	8.32	4.65	4.61	0.01	0.01
	10.79	4.75	5.35	0.01	0.02
	13.22	5.19	5.44	0.02	0.02
	15.51	5.23	5.4	0.02	0.01
	15.81	5.17	5.41	0.01	0.01
Su3	0	5.5	4.93	0.16	0.1
	2.95	5.68	5.09	0.02	0.09
	5.78	6.04	5.21	0.01	0.08
	8.32	6.08	5.31	0.01	0.01
	10.90	6.09	5.54	0.01	0.02
	13.32	6.11	5.59	0.01	0.02
	15.54	6.12	5.76	0.01	0.02
	17.47	6.15	6.05	0.01	0.01
	19.61	6.21	6.26	0.01	0.02
	20.18	6.21	6.26	0.02	0.01
Sl4	0	4.95	5.1	0.19	0.16
	2.93	5.25	5.23	0.07	0.04
	5.87	5.56	5.34	0.01	0.04
	8.40	5.93	5.69	0.02	0.02
	11.00	5.99	6.07	0.01	0.02
	13.29	6.01	6.15	0.01	0.02
	15.66	5.97	6.11	0.01	0.01
	17.71	5.98	6.14	0.01	0.02
	19.70	6.02	6.2	0.01	0.02
	20.81	6.03	6.23	0.01	0.02
Ls4	0	4.79	4.94	0.1	0.28
	2.96	6.46	5.32	0.04	0.2
	5.83	6.48	5.73	0.02	0.02

	8.35	6.5	5.89	0.01	0.05
	10.86	6.51	6.38	0.02	0.02
	13.44	6.55	6.42	0.01	0.02
	15.61	6.59	6.46	0.01	0.02
	17.73	6.61	6.44	0.01	0.02
	19.61	6.6	6.41	0.02	0.01
Slu	0	5.12	5.15	0.07	0.11
	2.95	5.75	5.32	0.06	0.08
	5.88	6	5.49	0.01	0.08
	8.5	6.15	5.6	0.01	0.04
	10.91	6.23	5.82	0.02	0.02
	13.36	6.38	6	0.01	0.02
	15.6	6.68	6.08	0.02	0.01
	17.68	6.71	6.37	0.01	0.01
	19.83	6.74	6.56	0.02	0.01
	21.66	6.69	6.69	0.02	0.01
	23.61	6.75	6.68	0.02	0.01
	23.99	6.71	6.63	0.02	0.02

**Table S2: Measured soil pH values (Mean and Standard deviation) at varying SMCs and soil textures 2.**

Soil texture	SMC [Mass %]	Mean, pH [Epoxy-body]	Mean, pH [Antimony]	StdDev, pH [Epoxy-body]	StdDev, pH [Antimony]
Lt2	0.00	5.25	5.6	0.21	0.32
	3.85	6.44	5.61	0.2	0.15
	7.87	7.01	5.87	0.02	0.01
	10.97	7.04	6.01	0.02	0.03
	14.32	7.1	6.36	0.01	0.02
	17.62	7.11	6.63	0.01	0.01
	20.58	7.14	6.7	0.01	0.02
	23.21	7.24	6.91	0.01	0.01
	25.59	7.4	7.15	0.02	0.01
	27.74	7.43	7.14	0.01	0.01
Lts	0	4.73	4.42	0.05	0.22
	3.88	5.2	5.23	0.02	0.06
	7.61	5.86	5.5	0.02	0.02
	10.9	5.94	5.97	0.01	0.01
	14.18	5.99	6.08	0.01	0.02

	17.04	6.1	6.3	0.01	0.01
	19.87	6.25	6.24	0.02	0.01
	21.41	6.23	6.27	0.01	0.01
	0.00	5.43	5	0.15	0.2
	3.93	5.68	5.53	0.03	0.02
	7.57	5.98	5.83	0.04	0.03
	10.84	6.06	6.24	0.01	0.02
Ts4	14.17	6.1	6.24	0.01	0.02
	16.30	6.27	6.24	0.01	0.02
	18.47	6.3	6.26	0.01	0.02
	20.25	6.33	6.24	0.01	0.01
	20.87	6.38	6.26	0.01	0.01
	0	4.55	4.22	0.2	0.3
	3.84	5.18	4.97	0.04	0.06
	7.64	5.9	5.41	0.02	0.03
	10.92	6.09	5.82	0.02	0.01
	14.1	6.18	6.09	0.01	0.02
Tl	17.23	6.26	6.14	0.01	0.02
	19.97	6.21	6.17	0.01	0.02
	22.46	6.23	6.21	0.02	0.01
	25.1	6.27	6.18	0.02	0.02
	28.15	6.22	6.25	0.02	0.01
	0.00	4.24	4.46	0.14	0.27
	3.98	5.87	5.37	0.03	0.03
	7.71	5.98	5.74	0.02	0.02
	10.88	6.12	6.01	0.02	0.02
	14.20	6.35	6.1	0.01	0.02
	17.38	6.5	6.43	0.01	0.01
Tt	20.14	6.57	6.49	0.02	0.02
	22.49	6.58	6.47	0.02	0.02
	24.57	6.64	6.47	0.01	0.01
	26.97	6.65	6.45	0.02	0.01
	28.57	6.66	6.44	0.02	0.01