

Supplemental Material Table S1. Field description of the investigated soil profiles.

Profile	Depth (cm)	Horizon	Soil moisture	Munsell Colour (dry)	Munsell Colour (wet)	Aggregates	Roots size/ frequency	Bound distinctnes/ topography
<b>BV16/01</b>	0-8	O	Moist	2.5 Y 3/2	10 YR 2/2	Granular	very fine to fine/ Common	Clear/ Smooth
	8-20	OA	Moist	10 YR 3/2	10 YR 2/1	Granular	very fine to medium/ Few	Clear/ Smooth
	20-30+	AC	Moist	10 YR 5/2	10 YR 3/2	Granular	very fine to medium/ Few	Absent
<b>BV16/02</b>	0-12	O	Moist	2.5 Y 3/2	10 YR 2/2	Absent	Very fine to medium/ Few	Clear/ Smooth
	12-20	AC	Moist	2.5 Y 3/2	10 YR 2/2	Granular	Very fine to medium/ Few	Abrupt/ Smooth
	20-35	2AB	Moist	2.5 Y 5/6	10 YR 3/4	Granular	Very fine to medium/ Few	Gradual/ Smooth
	35-50	2Bw	Moist	2.5 Y 6/4	2.5 Y 4/4	Sub. Blocky	Very fine to medium/ Few	Clear/ Smooth
	50-75+	2BC	Moist	5 Y 6/3	5 Y 4/3	Sub. Blocky	Very fine to fine/ Few	Absent
<b>BV16/03</b>	0-6	OA	Moist	10 YR 5/2	10 YR 3/2	Absent	Very fine to medium/ Few	Clear/ Smooth
	6-12	A	Moist	2.5 Y 6/2	2.5 Y 3/2	Granular	Very fine to fine/ Few	Abrupt/ Wavy
	12-30+	BC	Moist	10 YR 6/4	10 YR 3/4	Sub. Blocky	Very fine to medium/ Few	Absent
<b>BV16/04</b>	0-5	O	Moist	10 YR 3/2	10 YR 2/2	Granular	Very fine to medium/ Few	Clear/ Smooth
	5-10	A	Moist	10 YR 6/3	10 YR 4/2	Absent	Very fine to medium/ Few	Clear/ Smooth
	10-20+	BC	Moist	2.5 Y 5/4	2.5 Y 4/4	Sub. Blocky	Very fine to medium/ Few	Absent
<b>BV16/05</b>	0-10	O	Moist	2.5 Y 3/2	10 YR 2/1	Granular	Very fine to medium/ Few	Clear/ Smooth
	10-20+	AC	Moist	2.5 Y 5/4	2.5 Y 3/2	Granular	Very fine to medium/ Few	Absent
<b>BV16/06</b>	0-10	OA	Moist	2.5 Y 3/2	10 YR 2/2	Granular	Very fine to medium/ Few	Clear/ Smooth
	10-20+	AC	Moist	2.5 Y 5/2	2.5 Y 3/2	Granular	Very fine to medium/ Few	Absent
<b>BV16/07</b>	0-8	O	Moist	2.5 Y 3/2	10 YR 2/2	Granular	very fine to fine/ Common	Clear/ Smooth
	8-15	AC	Moist	2.5 Y 6/4	2.5 Y 4/2	Granular	very fine to fine/ Common	Abrupt/ Wavy
	15-30	BC1	Moist	2.5 Y 6/4	2.5 Y 4/4	Sub. Blocky	Very fine to coarse/ Few	Gradual/ Smooth
	30-60+	BC2	Moist	2.5 Y 5/4	2.5 Y 4/4	Sub. Blocky	Very fine to coarse/ Common	Absent

Supplemental Material Table S2. Soil analyses results.

Profile	Horizons	Depth (cm)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	pH	C Org. (g/Kg)	Org. Matter (g/Kg)	Total N (g/Kg)	C/N
<b>BV16/01</b>	O	0-8	5.7	n.d.	n.d.	n.d.	4.8	115.5	199.1	10.2	11.3
	OA	8-20	7.9	32.2	48.8	11.1	4.6	79.8	137.5	4.6	17.3
	AC	20-30+	20.0	28.4	44.8	6.8	4.8	48.2	83.0	2.8	17.2
<b>BV16/02</b>	O	0-12	10.8	18.3	57.5	13.4	5.2	88.9	153.3	6.1	14.6
	AC	12-20	48.1	8.0	37.4	6.5	5.0	44.5	76.7	2.4	18.5
	2AB	20-35	47.6	23.3	26.7	2.4	5.1	20.1	34.6	1.4	14.4
	2Bw	35-50	47.8	26.6	24.0	1.6	5.4	9.5	16.4	0.8	11.9
	2BC	50-75+	42.1	32.5	23.7	1.7	5.6	3.8	6.5	0.5	7.6
<b>BV16/03</b>	OA	0-6	9.9	32.9	47.3	9.9	4.8	55.8	96.3	4.1	13.6
	A	6-12	19.4	30.2	44.8	5.6	4.6	20.8	35.9	1.8	11.6
	BC	12-30+	36.0	31.0	30.8	2.2	4.8	17.6	30.3	1.6	11.0
<b>BV16/04</b>	O	0-5	3.0	n.d.	n.d.	n.d.	5.1	106.1	182.9	7.2	14.7
	A	5-10	23.8	28.9	43.5	3.8	4.9	23.9	41.1	1.7	14.1
	BC	10-20+	48.5	26.8	23.2	1.5	5.1	14.1	24.3	0.9	15.7
<b>BV16/05</b>	O	0-10	7.4	28.2	55.1	9.3	5.4	119.9	206.8	10.3	11.6
	AC	10-20+	65.1	15.1	15.6	4.2	4.9	39.0	67.2	2.1	18.6
<b>BV16/06</b>	OA	0-10	6.2	n.d.	n.d.	n.d.	5.4	68.4	117.9	7.8	8.8
	AC	10-20+	7.3	28.3	48.6	15.8	5.5	57.1	98.4	4.0	14.3
<b>BV16/07</b>	O	0-8	5.5	26.9	62.4	5.2	5.1	135.0	232.8	9.3	14.5
	AC	8-15	37.5	25.9	31.0	5.6	5.2	28.3	48.7	1.9	14.9
	BC1	15-30	61.3	23.5	15.0	0.2	5.4	12.9	22.2	0.9	14.3
	BC2	30-60+	57.7	24.3	17.2	0.8	5.2	10.1	17.4	1.1	9.2

Supplemental Material Figure F1. Cumulative curves of particles size.

