

Table S1. Physico-chemical characteristics of SA and SB before Sb spiking

<i>Physico-chemical parameters</i>	SA soil	SB soil
pH _(H₂O)	4.91 ± 0.2	8.22 ± 0.1
EC (μS cm ⁻¹)	327 ± 4	378 ± 8
DOC (mg g ⁻¹)	0.39 ± 0.02	0.17 ± 0.00
Organic matter (%)	2.19 ±	1.75 ±
Total carbonates (g kg ⁻¹)	12 ± 0.28	300 ± 1.27
Active carbonate (g kg ⁻¹)	11 ± 0.44	82 ± 0.91
Total P (mg kg ⁻¹)	272 ± 34	330 ± 26
Available P (mg kg ⁻¹)	56 ± 1.4	31 ± 2.6
CEC (cmol ₍₊₎ kg ⁻¹)	12.9 ± 2.5	21.1 ± 0.8
pH _{PZC}	2.6	5.7
Texture (USDA)	Loamy coarse sand	Sandy clay loam
<i>Total metal(loid)s (mg kg⁻¹)</i>		
Fe	5,650 ± 71	16,350 ± 1,061
Mn	87 ± 2	174 ± 16
Na	750 ± 71	2,150 ± 636
K	1,500 ± 139	7,100 ± 707
Mg	770 ± 14	3,100 ± 283
Ca	2,426 ± 145	62,500 ± 2,828
Al	3,924 ± 749	19,930 ± 1,018
As	n.d.*	n.d.*
Cd	n.d.**	n.d.**
Cu	37.36	54.82
Pb	42.38	51.14
Zn	77.05	110.67
Sb	n.d.*	n.d.*

*n.d., not detected (< 1 mg kg⁻¹). **n.d., not detected (< 0.1 mg kg⁻¹). Unshaded data are from Diquattro et al. (2020) Ecotoxicology and Environmental Safety 196, 110576, <https://doi.org/10.1016/j.ecoenv.2020.110576>.

Total As, Cd, Cu, Zn, and Pb were determined in soil as for total Sb concentration (see paragraph 2.2 of the Materials and Methods section).

Table S2. Chemical characteristics of the MSWC

<i>Chemical parameters</i>	
pH	7.93±0.06
EC (mS·m ⁻¹)	326±0.03
Ashes (%)	42.1±3.21
Humidity %	9.75±0.53
Total organic carbon (TOC, %)	27.3±0.61
Dissolved organic Carbon (DOC; mg kg ⁻¹)	0.82±0.04
Cation Exchange Capacity (cmol ₍₊₎ kg ⁻¹)	92.3±0.83
Total phosphorus (%)	0.71 ±0.11
Elemental composition C (%)	27.5±0.37
Elemental composition N (%)	2.18±0.04
Elemental composition H (%)	3.17±0.01
Total extractable carbon (TEC: %)	16.4±0.17
Humic acids (HA: %)	14.2±0.11
Total Acidity (meq g ⁻¹ HA)	8.71±0.24
COOH (meq g ⁻¹ HA)	5.19±0.84
Ar-OH (meq g ⁻¹ HA)	3.52±0.34
Fulvic acids (FA: %)	1.10±0.21
Total Acidity (meq g ⁻¹ FA)	13.3±1.44
COOH (meq g ⁻¹ FA)	11.6±1.59
Ar-OH (meq g ⁻¹ FA)	1.75±0.09
<i>Total elements (mg kg⁻¹)</i>	
Pb	3.72±0.15
Zn	30.5±3.20
Cd	n.d.
Cu	19.2±1.74
Fe	5,587±88.0
Mn	141±5.7
Na	993±24.2
K	1,709±21.1
Mg	5,403±135
Ca	63,444±130