Identification of dredged sediment-derived soils in the alluvial plains of the Leie, the Upper and Sea Scheldt river (Belgium) based on physico-chemical soil properties

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Table 1S. Summary statistics for the physico-chemical properties of the alluvial plain soil (*n* = 104)

	Mean	Stdev.	Median	Min.	5th Perc.	95th Perc.	Max.
Cd (mg kg^{-1} DM)	0.8	0.5	0.6	0.2	0.4	2.0	2.3
Cr (mg kg^{-1} DM)	66	25	66	17	26	112	126
Cu (mg kg^{-1} DM)	22	12	20	5	8	45	78
Ni (mg kg^{-1} DM)	23	10	22	4	8	39	54
Pb (mg kg^{-1} DM)	49	30	43	7	17	97	192
Zn (mg kg^{-1} DM)	129	69	111	38	52	245	441
% clay	22	8	22	7	8	37	42
% silt	45	16	44	13	17	68	73
% sand	33	22	31	0	1	74	79
P (g kg^{-1} DM)	0.9	0.3	0.9	0.2	0.5	1.6	2.1
S (g kg^{-1} DM)	0.7	0.4	0.6	0.2	0.2	1.4	1.7
N (g kg^{-1} DM)	3.8	1.7	3.7	0.1	1.3	6.8	8.3
% $CaCO_3$	1.9	1.7	1.4	0.0	0.1	5.5	7.4
% OC	3.2	1.5	3.1	0.8	1.1	5.7	7.8
pH-H_2O	6.9	0.8	6.9	4.6	5.8	8.0	8.2
pH-$CaCl_2$	6.2	0.8	6.2	3.9	5.2	7.3	7.6
EC (µS cm^{-1})	167	73	166	34	61	291	403

Table 2S. Summary statistics for the physico-chemical properties of the known dredged sediment landfills (*n* = 102)

	Mean	Stdev.	Median	Min.	5th Perc	95th Perc.	Max.
Cd (mg kg^{-1} DM)	14.7	8.4	12.6	0.5	2.8	29.0	35.5
Cr (mg kg^{-1} DM)	820	757	460	66	137	2298	2769
Cu (mg kg^{-1} DM)	65	1009	153	5	62	297	362
Ni (mg kg^{-1} DM)	42	15	41	12	17	68	83
Pb (mg kg^{-1} DM)	292	158	249	48	98	570	916
Zn (mg kg^{-1} DM)	1866	883	1758	255	571	3535	4224
% clay	36	12	37	11	15	57	62
% silt	48	9	50	22	30	58	67
% sand	16	16	11	0	1	52	64
P (g kg^{-1} DM)	3.9	1.6	3.7	1.2	1.7	6.6	7.1
S (g kg^{-1} DM)	3.6	2.5	2.8	0.7	1.0	8.0	13.6
N (g kg^{-1} DM)	3.9	1.4	3.8	1.6	1.9	5.8	12.4
% $CaCO_3$	7.5	1.6	7.6	4.3	5.2	10.0	11.9
% OC	4.2	1.4	4.1	0.9	1.9	6.6	7.5
pH-H_2O	7.4	0.2	7.4	6.9	7.1	7.7	7.9
pH-$CaCl_2$	7.2	0.2	7.2	6.6	6.8	7.5	7.6
EC (µS cm^{-1})	1032	744	895	124	162	2234	2550

Table 3S. C/S ratios from literature

Location	Author	C/S ratio
pasture, Northern Ireland	(36)	69
A-horizon under hardwood forest, Otto	(37)	131
A-horizon under hardwood forest, Otto	(37)	145
A-horizon under hardwood forest, Otto	(37)	187
non-polluted sediment, Otto	(37)	60
A-horizon under hardwood forest, Otto	(37)	343
A-horizon under hardwood forest, Otto	(37)	225
A-horizon under hardwood forest, Otto	(37)	175
arable land Schotland	(38)	54
arable land Northtumberland	(38)	63
arable land Bedfordshire	(38)	49
arable landHertfordshire	(38)	62
floodplain forest soil, 0-10 cm, Canada	(39)	76
upland forest soil, 0-10 cm, Canada	(39)	42
Sifton Bog, Canada	(40)	220
Point Pelee Marsh, Canada	(40)	55
pasture, 0-15 cm, Northtumberland	(41)	74
pasture, 0-15 cm, Northtumberland	(41)	82
pasture, 0-15 cm, Northtumberland	(41)	94
pasture, 0-15 cm, Northtumberland	(41)	84
pasture, 0-15 cm, Northtumberland	(41)	116
pasture, 0-15 cm, Northtumberland	(41)	80
non-polluted sediment (1), Ravenna	(42)	14
non-polluted sediment (2), Ravenna	(42)	59
non-polluted sediment (3), Ravenna	(42)	207
non-polluted sediment (4), Ravenna	(42)	113
non-polluted sediment (5), Ravenna	(42)	124
poll. river alluvium sediments, Louisiana	(43)	34
polluted sediment (1), Ravenna	(42)	11
polluted sediment (2), Ravenna	(42)	15
polluted sediment (3), Ravenna	(42)	6
polluted sediment (4), Ravenna	(42)	14
polluted sediment (5), Ravenna	(42)	16
polluted sediment (6), Ravenna	(42)	21
polluted sediment (7), Ravenna	(42)	58
polluted sediment, Belgium	(44)	3

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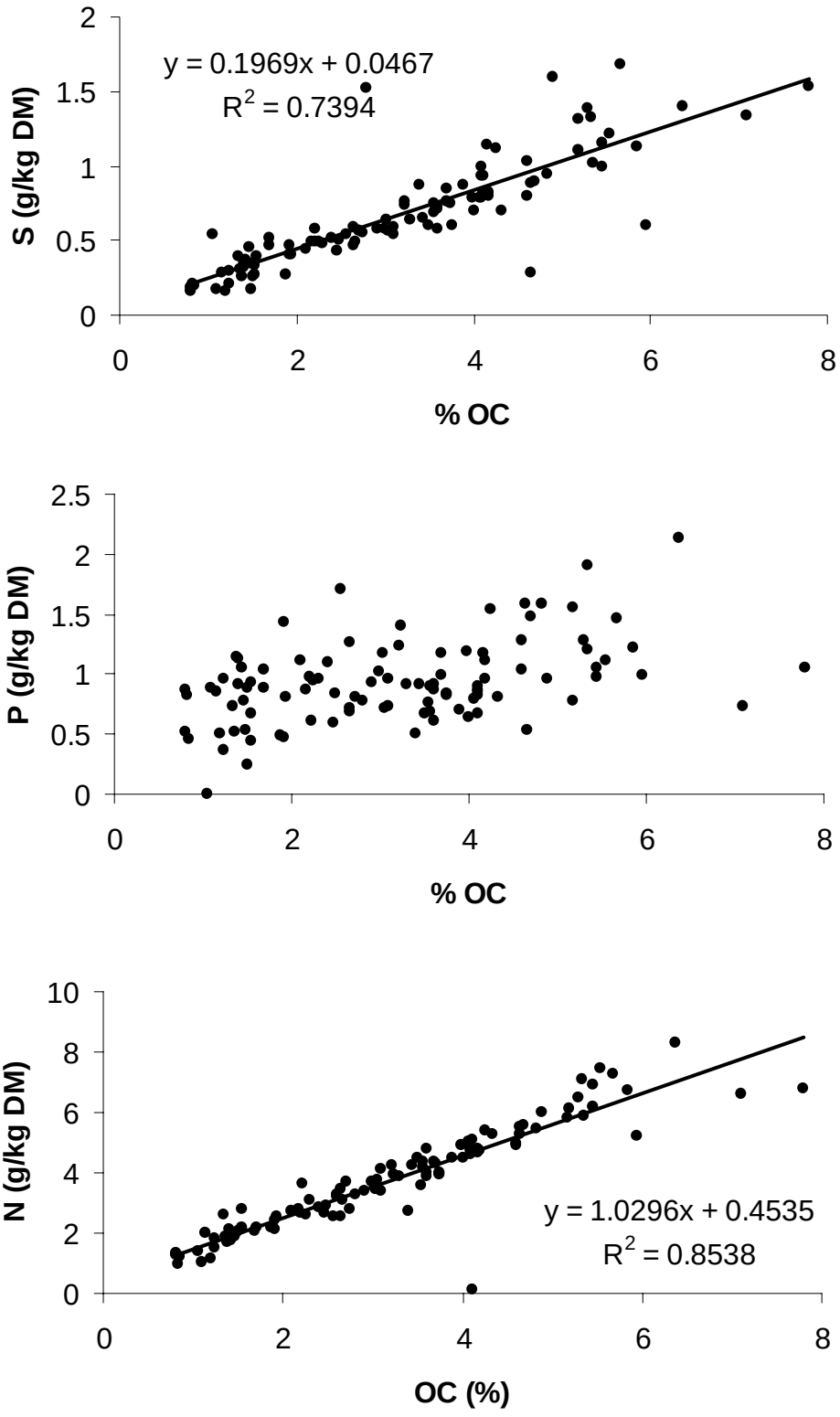

Fig. 1S. C/S, C/P and C/N ratio for the topsoil layers of 104 samples from the alluvial plains from the Upper and Sea scheldt and Leie river.