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Supplementary Material

Aromatic Coconut Biochar Types and Rainfall Rates Affect Soil Nutrient Retention from Swine Wastewater

Siriwan Wongsod[1], Suchanya Wongrod[1,2,*], Soydoa Vinitnantharat[2], David Werner[3]

[1] Environmental Technology Program, School of Energy, Environment and Materials, King Mongkut's University of Technology Thonburi, 126 Pracha Uthit Rd, Bang Mod, Thung Khru, Bangkok 10140, Thailand; siriwan.wong@kmutt.ac.th
[2] Environmental and Energy Management for Community and Circular Economy (EEC&C) Research Group, King Mongkut's University of Technology Thonburi, 126 Pracha Uthit Rd, Bang Mod, Thung Khru, Bangkok 10140, Thailand; soydoa.vin@mail.kmutt.ac.th
[3] School of Engineering, Newcastle University, Newcastle NE1 7RU, UK; david.werner@iswa.uni-stuttgart.de
* Correspondence: suchanya.won@kmutt.ac.th

Table S1. Inorg-N leached out (mgN) of piglet and fattening SW condition.

Day	Piglet SW				Fattening SW			
	Soil	Soil + CH	Soil + CS	Soil + CHCS	Soil	Soil + CH	Soil + CS	Soil + CHCS
3	-	-	-	-	4.05 ± 0.81	4.23 ± 2.58	4.76 ± 1.12	4.64 ± 1.66
5	2.49 ± 0.36	2.15 ± 0.03	2.43 ± 0.61	1.85 ± 0.45	8.43 ± 3.08	6.17 ± 2.58	6.60 ± 0.88	7.31 ± 0.18
7	6.28 ± 0.69	6.65 ± 0.55	6.25 ± 0.42	5.55 ± 0.26	13.76 ± 0.71	9.70 ± 6.08	12.21 ± 0.18	12.85 ± 0.72
14	11.30 ± 0.83	11.20 ± 1.86	11.54 ± 1.30	11.12 ± 0.96	23.65 ± 2.95	18.24 ± 5.79	24.23 ± 0.45	19.78 ± 2.09
21	13.85 ± 0.74	12.01 ± 0.40	12.91 ± 0.52	12.73 ± 1.54	21.34 ± 1.88	22.90 ± 2.00	21.94 ± 2.98	23.59 ± 0.65
28	13.29 ± 0.36	11.95 ± 0.44	12.42 ± 0.37	12.46 ± 2.69	16.12 ± 9.19	18.56 ± 4.68	20.91 ± 1.74	21.07 ± 1.20
35	13.30 ± 0.54	12.10 ± 1.01	13.00 ± 1.58	14.06 ± 1.80	18.02 ± 7.14	22.21 ± 0.42	22.11 ± 0.40	22.06 ± 0.29
42	11.18 ± 0.30	11.39 ± 0.33	12.53 ± 0.34	12.36 ± 0.33	16.92 ± 0.47	18.85 ± 1.33	16.28 ± 6.85	20.91 ± 2.65

Note: ND: not detected. CH: coconut husk biochar, CS: coconut shell biochar, CHCS: a mixture of CH and CS biochar. Each treatment was performed in triplicate (n=3).

Table S2. TN leached out (mgN) of piglet and fattening SW condition.

Day	Piglet SW				Fattening SW			
	Soil	Soil + CH	Soil + CS	Soil + CHCS	Soil	Soil + CH	Soil + CS	Soil + CHCS
3	-	-	-	-	12.64 ± 3.94	11.16 ± 5.10	15.24 ± 2.63	13.23 ± 1.48
5	5.52 ± 1.27	4.41 ± 1.34	8.45 ± 1.72	5.84 ± 3.05	12.50 ± 1.86	9.98 ± 3.35	11.74 ± 0.51	12.17 ± 1.19
7	7.74 ± 1.53	8.24 ± 1.95	9.75 ± 0.66	6.59 ± 0.59	19.35 ± 2.12	14.86 ± 3.52	19.21 ± 1.82	19.36 ± 5.59
14	13.01 ± 1.39	13.95 ± 3.90	15.30 ± 1.24	13.96 ± 1.41	29.94 ± 2.20	23.03 ± 4.88	28.38 ± 0.68	23.66 ± 1.27
21	17.40 ± 1.29	15.99 ± 1.70	16.88 ± 0.63	15.80 ± 1.26	27.70 ± 0.78	33.52 ± 5.12	26.76 ± 2.93	28.68 ± 1.42
28	16.56 ± 1.47	13.79 ± 0.47	16.11 ± 0.64	14.11 ± 2.28	20.99 ± 10.70	25.75 ± 8.55	26.38 ± 3.43	27.48 ± 2.80
35	15.72 ± 1.37	13.65 ± 0.89	15.49 ± 1.93	16.29 ± 2.26	21.30 ± 8.42	19.51 ± 10.23	25.38 ± 1.32	25.63 ± 1.77
42	13.39 ± 1.23	12.22 ± 0.92	12.52 ± 1.22	12.32 ± 2.12	22.10 ± 0.70	19.99 ± 4.93	19.02 ± 3.65	22.36 ± 3.66

Note: ND: not detected. CH: coconut husk biochar, CS: coconut shell biochar, CHCS: a mixture of CH and CS biochar. Each treatment was performed in triplicate (n=3).

Table S3. PO_4^{3-} leached out (mgP) of piglet and fattening SW condition.

Day	Piglet				Fattening			
	Soil	**Soil + CH**	**Soil + CS**	**Soil + CHCS**	**Soil**	**Soil + CH**	**Soil + CS**	**Soil + CHCS**
3	-	-	-	-	ND	ND	ND	ND
5	2.29 ± 0.45	2.60 ± 0.35	2.23 ± 0.25	2.36 ± 0.26	0.51 ± 0.44	0.67 ± 0.58	0.87 ± 0.52	0.77 ± 0.11
7	3.17 ± 0.36	3.23 ± 0.57	2.51 ± 0.18	2.38 ± 0.45	0.47 ± 0.38	0.31 ± 0.26	0.77 ± 0.22	0.54 ± 0.62
14	0.79 ± 0.07	1.03 ± 0.39	0.88 ± 0.10	0.94 ± 0.07	2.52 ± 1.78	1.63 ± 1.60	2.78 ± 0.30	0.81 ± 0.45
21	0.45 ± 0.15	0.63 ± 0.07	0.53 ± 0.05	0.50 ± 0.13	2.79 ± 0.70	3.96 ± 0.31	4.03 ± 1.69	4.27 ± 1.17
28	0.42 ± 0.08	0.42 ± 0.14	0.42 ± 0.11	0.40 ± 0.07	3.53 ± 1.62	3.29 ± 1.47	4.06 ± 0.96	4.18 ± 1.06
35	0.35 ± 0.11	0.35 ± 0.03	0.33 ± 0.03	0.27 ± 0.05	2.43 ± 2.08	2.61 ± 0.99	3.55 ± 0.40	4.69 ± 1.13
42	0.35 ± 0.04	0.22 ± 0.02	0.39 ± 0.01	0.31 ± 0.07	2.54 ± 1.43	3.27 ± 0.64	3.38 ± 0.29	4.65 ± 0.84

Note: ND: not detected. CH: coconut husk biochar, CS: coconut shell biochar, CHCS: a mixture of CH and CS biochar. Each treatment was performed in triplicate (n=3).

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