

Supplementary Material

Table S1 – Liming value of the biochars produced from four feedstocks pyrolysed at 350, 450 and 750 °C.

Feedstock	Pyrolysis temperature (°C)		
	350	450	750
	----- ml HCl/pH unit -----		
Chicken manure	2.90 ± 0.03	2.70 ± 0.03	2.20 ± 0.05
Eucalyptus sawdust	0.30 ± 0.01	0.20 ± 0.01	0.30 ± 0.01
Coffee husk	1.40 ± 0.02	1.60 ± 0.02	2.10 ± 0.04
Sugarcane bagasse	0.40 ± 0.01	0.30 ± 0.01	0.30 ± 0.01

Source: adapted from Domingues [28]. ¹Liming value determined by the acid-base titration method [41].

Table S2 - Linear regression mathematical models used to predict the final CEC of biochar-amended soils, using as predictors the biochar CEC and mass added to soil, soil original CEC and mass, and, when pertinent, net pH, hereafter defined as delta pH, which is the pH of treated over the pH of biochar- not treated soil)

Soil	Linear regression models	R ²
Red Latosol	CEC = -0.27 ^{ns} + 1.19 CEC biochar weight * + 0.94 CEC soil weight* + 0.73 net pH*	0.83
	CEC = 1.82* + 1.41 CEC biochar weight * + 0.87 CEC soil weight*	0.80
Red-Yellow Latosol	CEC = 1.94 ^{ns} + 1.05 CEC biochar weight * + 0.47 CEC soil weight ^{ns} - 0.25 net pH ^{ns}	0.70
	CEC = 1.69 ^{ns} + 0.96 CEC biochar weight* + 0.44 CEC soil weight ^{ns}	0.69
Two soils combined	CEC = -0.19 ^{ns} + 1.16 CEC biochar weight * + 1.00 CEC soil weight ^{ns} + 0.13 net pH ^{ns}	0.93
	CEC = -0.02 ^{ns} + 1.20 CEC biochar weight * + 1.00 CEC soil weight*	0.93

Notes: ^{ns} – non-significant ; * Statically significant at p<0.05