Article

Vine Pruning-Derived Biochar for Agronomic Benefits

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Supplementary material

Supplementary Table S1. Initial mean values ± SD of physicochemical properties of BC amendment, non-amended soils (S), and BC-amended soils (S + BC).

No.	Property	BC	S1	S2	S3	S1 + BC	S2 + BC	S3 + BC
1	HU (%)	3.51 ± 0.18[f]	14.69 ± 0.34[a]	10.43 ± 0.10[d]	13.10 ± 0.10[b]	12.33 ± 0.08[c]	9.60 ± 0.17[e]	12.36 ± 0.04[c]
2	BD (g/cm³)	0.319 ± 0.018[d]	1.054 ± 0.009[b]	0.986 ± 0.035[b]	1.314 ± 0.036[a]	0.799 ± 0.020[c]	0.851 ± 0.015[c]	0.873 ± 0.038[c]
3	pH	9.89 ± 0.01[a]	7.99 ± 0.01[c]	6.26 ± 0.02[f]	5.40 ± 0.02[g]	8.33 ± 0.03[b]	7.10 ± 0.03[d]	6.45 ± 0.11[e]
4	EC (dS/m)	2.04 ± 0.07[a]	0.22 ± 0.00[c]	0.10 ± 0.01[e]	0.09 ± 0.00[e]	0.35 ± 0.00[b]	0.21 ± 0.00[c]	0.16 ± 0.01[d]
5	C (%)	76.01 ± 0.68[a]	2.89 ± 0.10[d]	2.01 ± 0.02[e]	1.98 ± 0.10[e]	10.99 ± 1.09[c]	10.26 ± 0.63[c]	14.35 ± 0.27[b]
6	$N\text{-}NO_3$ (mg/kg)	5.4 ± 0.4[g]	31.2 ± 2.2[a]	14.9 ± 1.3[c]	9.2 ± 0.5[e]	26.2 ± 0.5[b]	11.3 ± 1.0[d]	8.0 ± 0.0[f]
7	$N\text{-}NH_4$ (mg/kg)	15.6 ± 1.4[a]	11.9 ± 0.2[c]	11.3 ± 0.3[c]	3.0 ± 0.2[e]	13.9 ± 0.3[b]	12.4 ± 0.3[c]	3.7 ± 0.3[d]
8	P (mg/kg)	16.0 ± 0.3[a]	6.3 ± 0.2[d]	2.3 ± 0.2[e]	0.8 ± 0.2[f]	13.6 ± 0.2[c]	14.7 ± 0.3[b]	2.9 ± 0.6[e]
9	K (mg/kg)	3131.1 ± 183.0[a]	23.9 ± 0.3[d]	5.5 ± 0.0[f]	6.4 ± 0.3[e]	132.0 ± 2.8[b]	130.1 ± 1.9[b]	51.1 ± 1.5[c]

(HU) humidity; (BD) bulk density; (EC) electrical conductivity; (C) total carbon concentration; ($N\text{-}NO_3$) soluble nitrate nitrogen concentration; ($N\text{-}NH_4$) soluble ammonium nitrogen concentration; (P) soluble phosphorus concentration; (K) soluble potassium concentration; (BC) biochar; (S1) fluvisol soil; (S2) chernozem soil; (S3) luvisol soil; different superscript letters in the same row indicate a significant difference ($p < 0.05$).