

Supplementary Table S1. Pearson correlations between DTPA-extractable Zn, Fe, Cu, Mn, B, and Monocalcium phosphate (MCP)-extractable S with nutrient concentrations in ryegrass shoots and roots.

Biochar	Shoots	Roots	Shoots+Roots
.....Zn.....			
SGB	0.73**	0.83**	0.85***
PLB	0.54 ^{NS}	0.68**	0.79**
SGB+PLB	0.46*	0.71***	0.74***
.....Fe.....			
SGB	0.37 ^{NS}	0.60*	0.58 ^{NS}
PLB	0.17 ^{NS}	0.43 ^{NS}	0.46 ^{NS}
SGB+PLB	0.34 ^{NS}	0.44*	0.44*
.....Cu.....			
SGB	-0.33 ^{NS}	-0.20 ^{NS}	-0.28 ^{NS}
PLB	-0.46 ^{NS}	-0.45 ^{NS}	-0.41 ^{NS}
SGB+PLB	-0.33 ^{NS}	-0.22 ^{NS}	-0.26 ^{NS}
.....Mn.....			
SGB	-0.20 ^{NS}	0.69**	0.55*
PLB	-0.76***	-0.64**	-0.74**
SGB+PLB	-0.31 ^{NS}	-0.06 ^{NS}	-0.18 ^{NS}
.....B.....			
SGB	-0.37 ^{NS}	0.57*	0.39 ^{NS}
PLB	0.07 ^{NS}	0.88***	0.90***
SGB+PLB	0.48*	0.78***	0.86***
.....S.....			
SGB	0.93***	0.89***	0.94***
PLB	0.89***	0.33 ^{NS}	0.83***
SGB+PLB	0.73***	0.75***	0.81***

***: $p < 0.001$; **: $p < 0.01$; *: $p < 0.05$; NS: non-significant ($p > 0.05$).

SGB and PLB are switchgrass- and poultry litter-derived biochars pyrolyzed at 700 °C, respectively; SGB+PLB: the soils treated with SGB and the soils treated with PLB are compiled together in the analyses.