



Modelling CO₂ emissions in different mining soils after biochar application

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Biochar represents a complex dynamic strategy that could help to solve many of the world's most pressing problems as emissions of greenhouse gases. The potential carbon sequestration in soil after biochar application depends on the stability of biochar, mainly of the fraction of biochar labile carbon and the recalcitrant fraction that is not easily metabolised by soil microorganisms. Therefore, the modelling soil CO₂ emissions could be crucial to evaluating long-term carbon sequestration that depends on different factors as pyrolysis temperature or raw material.

Different studies have shown that the priming effect of biochar-amended soils can be modelled using dual exponential model assuming two mineralised organic matter fractions, one relatively labile fraction and one refractory fraction.

The objective of this study is to evaluate the CO₂ emissions and soil organic matter transformation after the application of biochar prepared under different conditions to mining soils of different parts of Spain.

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