

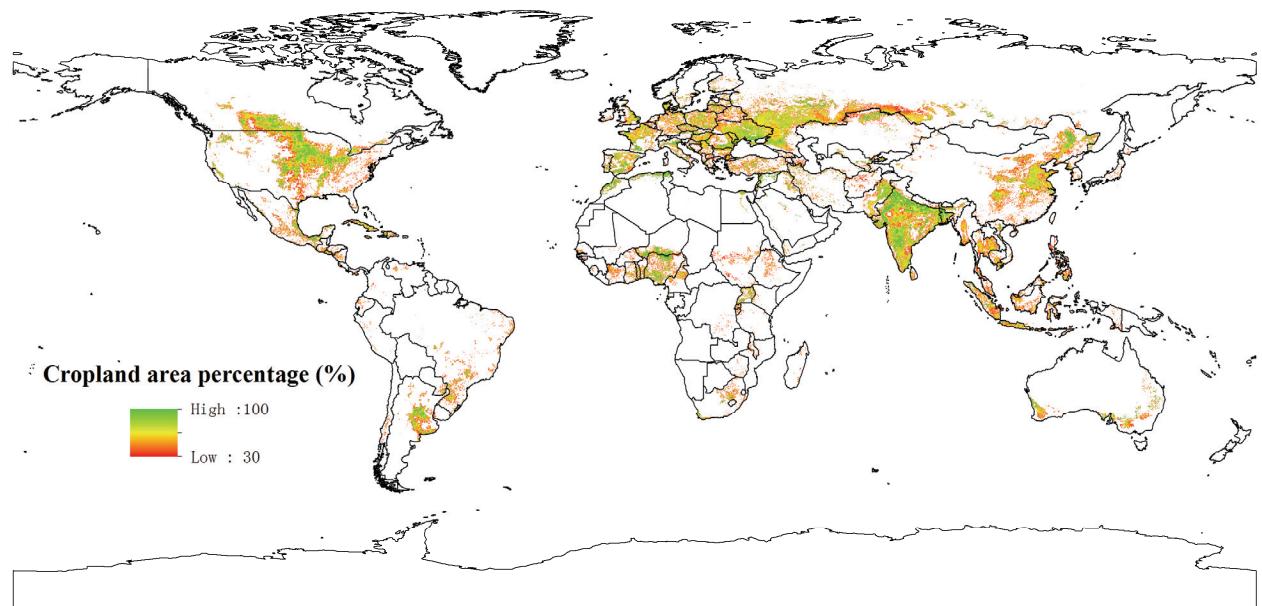
# Modeling soil organic carbon dynamics and its driving factors in global main cereal cropping systems

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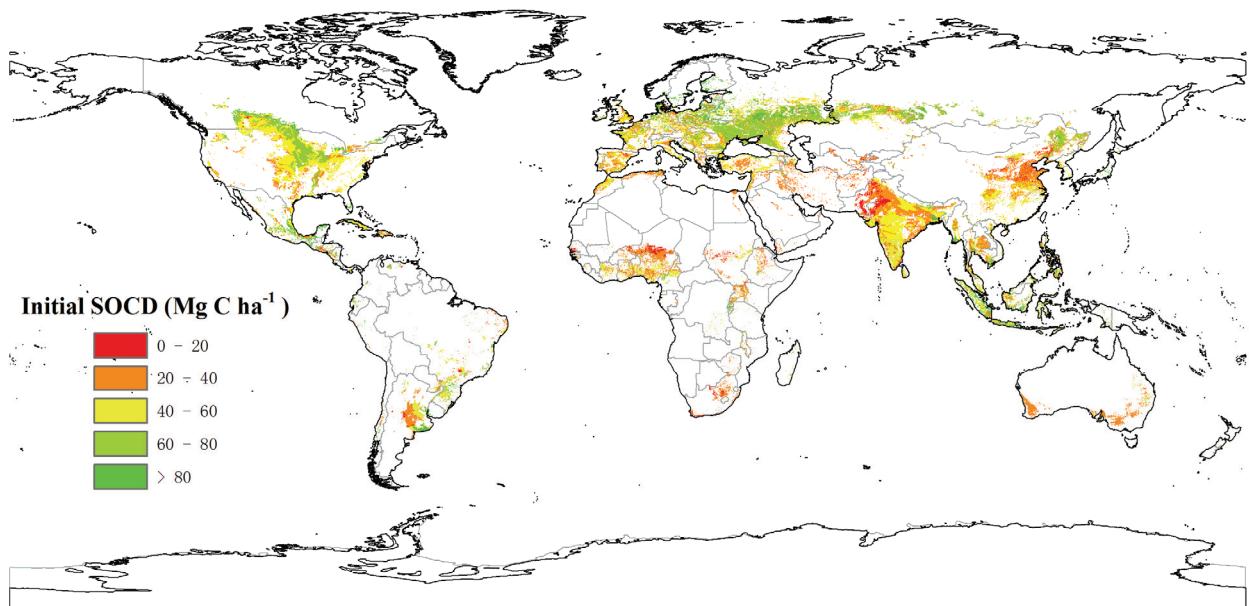
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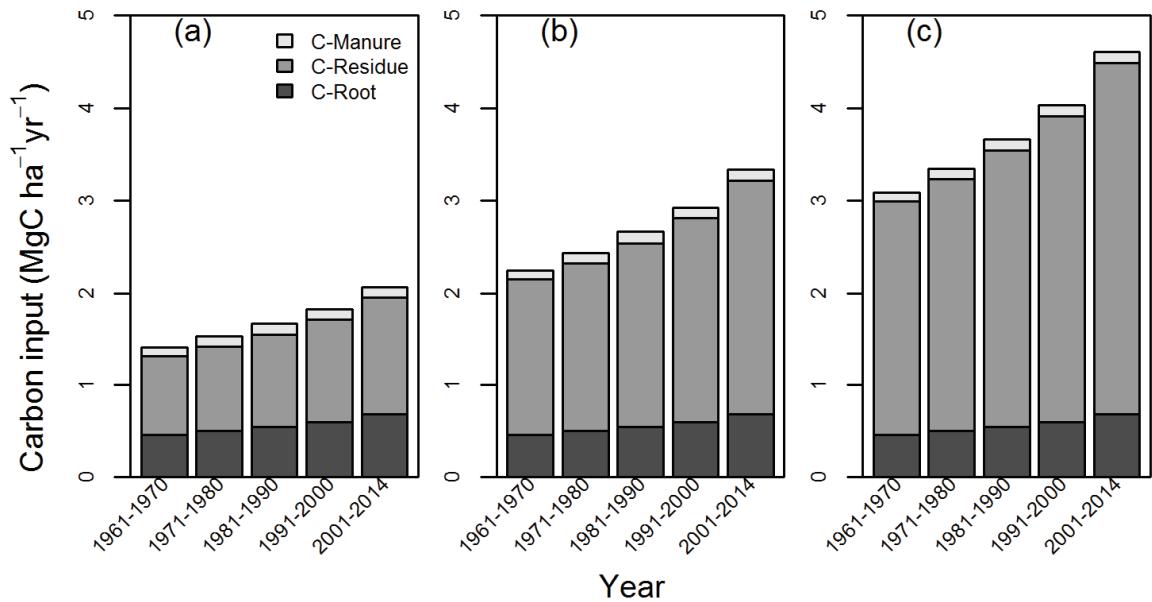
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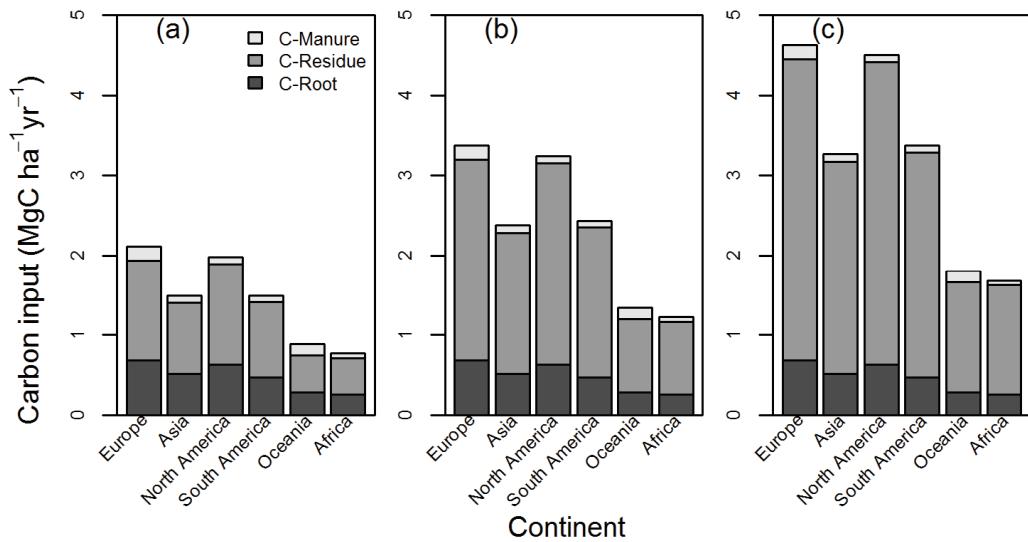
**Figure S1.** Spatial distribution of the main cereal-growing areas across the world.



**Figure S2.** Spatial distribution of the initial soil organic carbon density across the global main cereal-growing areas.



**Figure S3.** Temporal variations of carbon inputs in the global main cereal cropping regions under different above-ground crop residue retention rates of 30% (a), 60% (b) and 90% (c).



**Figure S4.** Carbon inputs across five continents in the global main cereal cropping regions under different above-ground crop residue retention rates of 30% (a), 60% (b) and 90% (c).