The combination of nitrogen and biochar altered the feedback mechanism between soil acidification and Cd availability in acidic soils

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In the present study, we evaluated the potential risks of Cd pollution in acidic soils after application of nitrogen fertilizers, and assessed the role biochar played in eliminating the risks. We focused on the interactions between soil nitrification and Cd availability and demonstrated a feedback mechanism—available Cd impacted soil microorganisms for nitrification process, thus influenced itself availability. Biochar provided a feasible strategy for eliminating the potential Cd toxicity, resisting the acidification and Cd availability caused by application of nitrogen fertilizers. Thus, we provided an example for better understanding and controlling of Cd from both biological and chemical processes simultaneously.