Supplementary data

Potential of wheat straw, spruce sawdust, and lignin as high organic carbon soil amendments to improve agricultural nitrogen retention capacity: an incubation study

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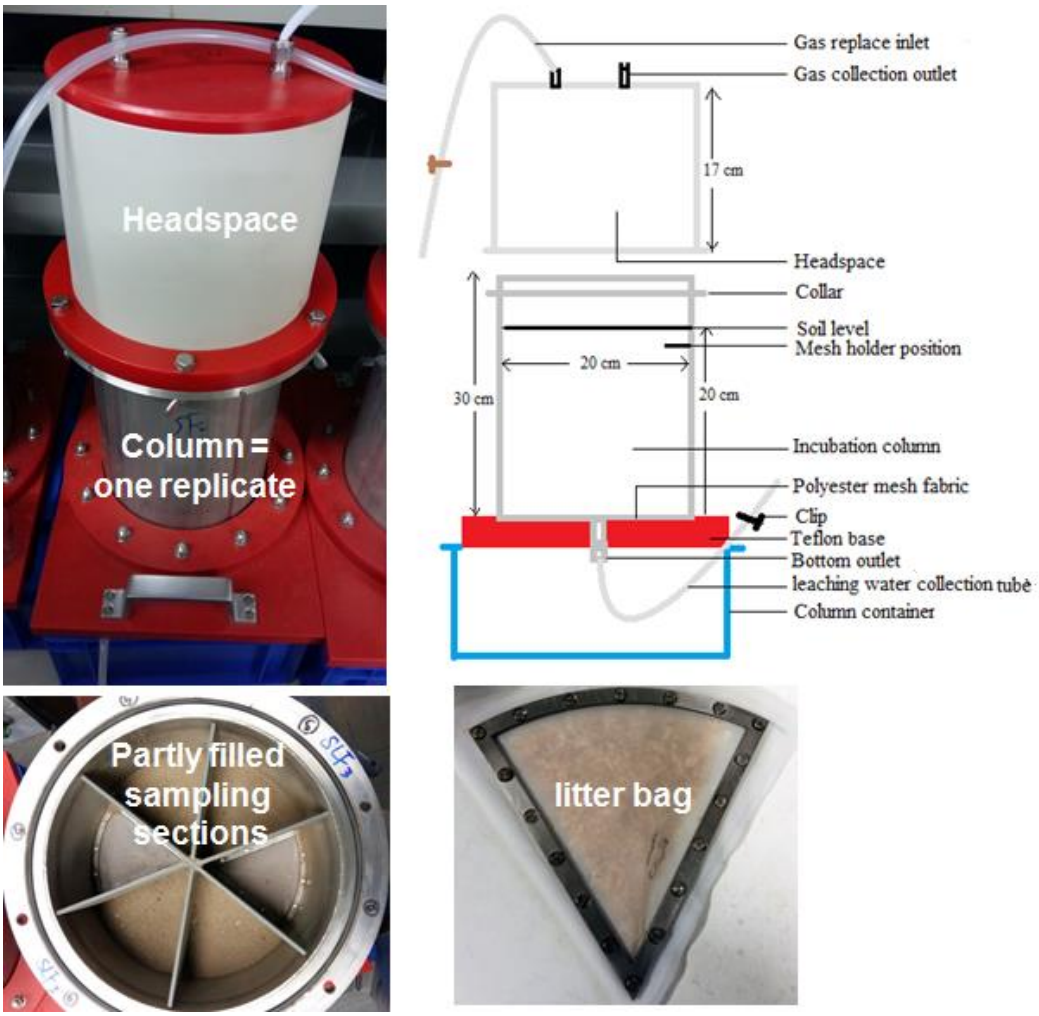

Figure S1. Stainless steel incubation column with headspace unit (top left); sketch of the incubation system (top right); segmentation for soil sampling at six incubation times (lower left); nylon mesh litter bags (pore size 0.2 µm; lower right).

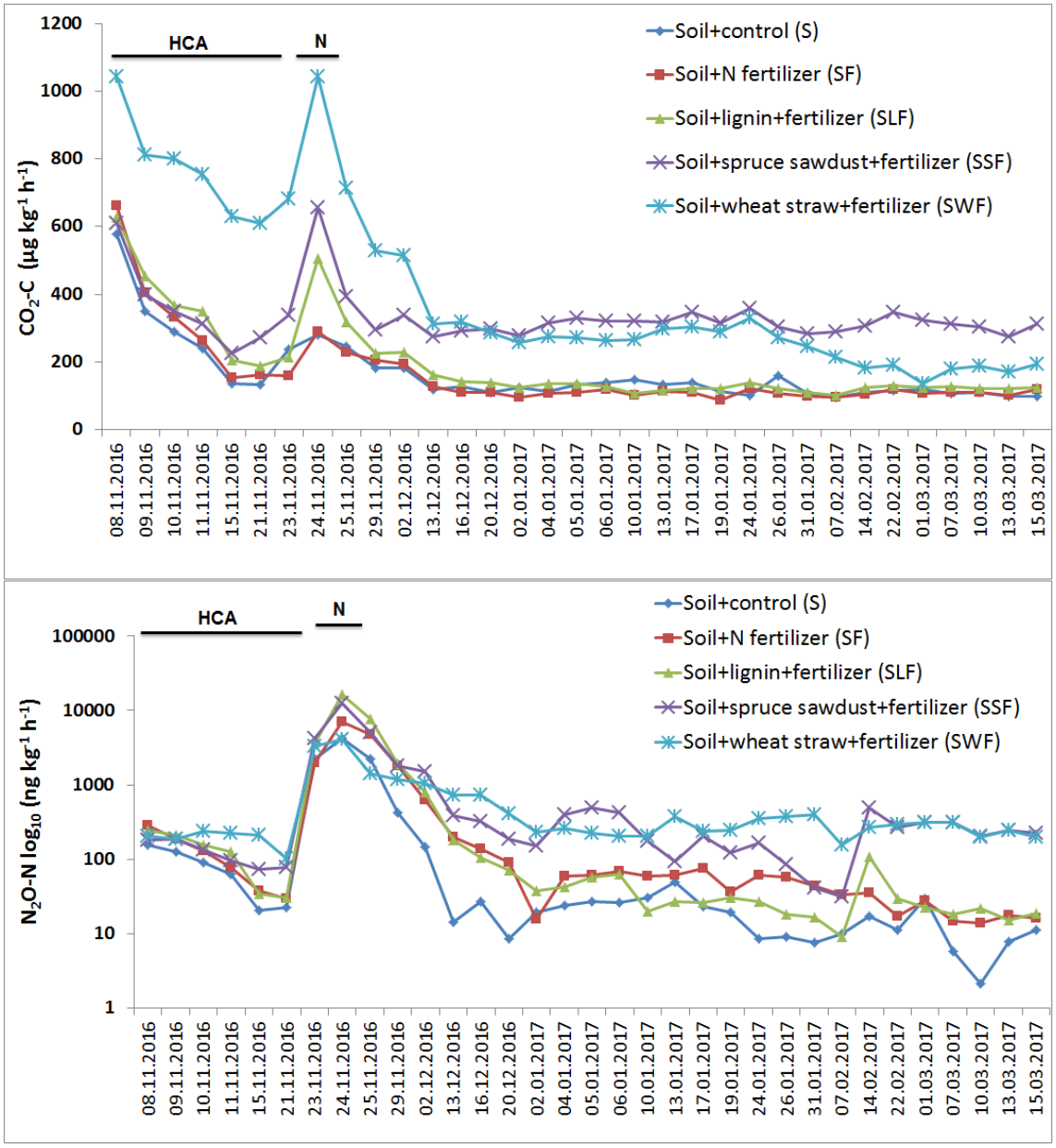

Figure S2. Mean CO_2 (µg C kg^{-1} h^{-1}) and N_2O emission (log scale, ng N kg^{-1} h^{-1}) in soil of the soil control treatment (S) without any N fertilizer (N) or high organic carbon soil amendments (HCA), the fertilizer control treatment (SF) with mineral N fertilizer, and the HCA treatments with mineral N fertilizer plus lignin (SLF), spruce sawdust (SSF), or wheat straw (SWF). Incubation time d = 0 divides the experiment into a period before (DBF) and after mineral N fertilization (DAF). Soil sampling was conducted only at 7 DBF (16 Nov), 7 DAF (30 Nov), 21 (14 Dec), 49 (11 Jan), 77 (8 Feb), and 113 DAF (16 Mar).