

Interactive comment on “Relevance of aboveground litter for soil organic matter formation – a soil profile perspective” by Patrick Liebmann et al.

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The following 5 papers report on field studies of enriched background ^{14}C isotopic tracers for multiyear controlled litter additions and the transfer of those labels into the soil. You might modify your statement on line 65 to recognize these efforts. The Kramer et al. 2010 paper is probably the most relevant, and you have already cited the related mesocosm study (Fröberg et al. 2009)

1. Tipping E, Chamberlain PM, Fröberg M, Hanson PJ, Jardine PM (2012) Simulation of carbon cycling, including dissolved organic carbon transport, in forest soil locally enriched with ^{14}C . Biogeochemistry 108:91-107, doi 10.1007/s10533-011-9575-1. 2.

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Parton WJ, Hanson PJ, Swanston C, Torn M, Trumbore SE, Riley W, Kelly R (2010) ForCent model development and testing using the Enriched Background Isotope Study (EBIS) experiment. JGR-Biogeosciences 115:G04001, doi:10.1029/2009JG001193 3. Kramer C, Trumbore S, Fröberg M, Cisneros-Dozal LM, Zhang D, Xu X, Santos G, Hanson PJ (2010) Recent (<4 year old) leaf litter is not a major source of microbial carbon in a temperate forest mineral soil. Soil Biology and Biochemistry 42:1028-1037. 4. Riley WJ, Gaudinski JB, Torn MS, Joslin JD, Hanson PJ (2009) Fine-root mortality rates in a temperate forest: estimates using radiocarbon data and numerical modeling. New Phytologist 184:387-398. 5. Fröberg M, Hanson PJ, Trumbore SE, Swanston CW, Todd DE (2009) Flux of carbon from ^{14}C -enriched leaf litter throughout a forest soil mesocosm. Geoderma 149:181-188. [Mesocosm study in support of the larger field EBIS effort.]

Interactive comment on Biogeosciences Discuss., https://doi.org/10.5194/bg-2019-465, 2020.