

Interactive comment on "Soil carbon and nitrogen erosion in forested catchments: implications for erosion-induced terrestrial carbon sequestration" by E. Stacy et al.

B. VandenBygaart (Referee)

bert.vandenbygaart@agr.gc.ca

Received and published: 4 March 2015

This paper provides interesting results of the erosion and deposition of C and N in forested catchments. I only have minor comments/suggestions:

Introduction: 2494 L14-15: It is not clear what the mechanisms are that arte responsible for the apparent stability of buried organic matter. See VandenBygaart et al. 2015 cited in manuscript.

2494 L27-28 "...compared to agriculture and rangeland systems" This statement requires a citation.

C505

2494 L1-3: This statement also needs a citation.

2495 L21-25: Since you are stating the answering of questions the listed should be stated as questions with question marks.

2497 L3: "in three of the low elevation Providence catchments"

2500 L18-19: Should it be Table 1 referred to here or Table 3? L18-22: It is not clear where these data are demonstrated. Is it not Table 3?

2510 L3: should read "though these features are not common" Frequency implies a temporal context.

2510 L24 "Also could cite VandenBygaart et al. 2015 here.

2512 L12: delete "materials. L13: "and that they are likely transported..."

2512 L19 ""in flow for any given year (Fig. 4)."

L18: ..., 2015), and sorption of..."

2513 L8 "free light fraction OM". In cropland, our study found that buried C had a high proportion of light fraction SOM yet the rate of decomposition was still much lower than the surface soils, suggesting that perhaps the LF was also stabilized more than the LF at the surface. Also dating by 137Cs and 14C indicated that the LF had been stabilized for decades since its deposition.

2415 L14: do you mean "carbonaceous"?

Interactive comment on Biogeosciences Discuss., 12, 2491, 2015.