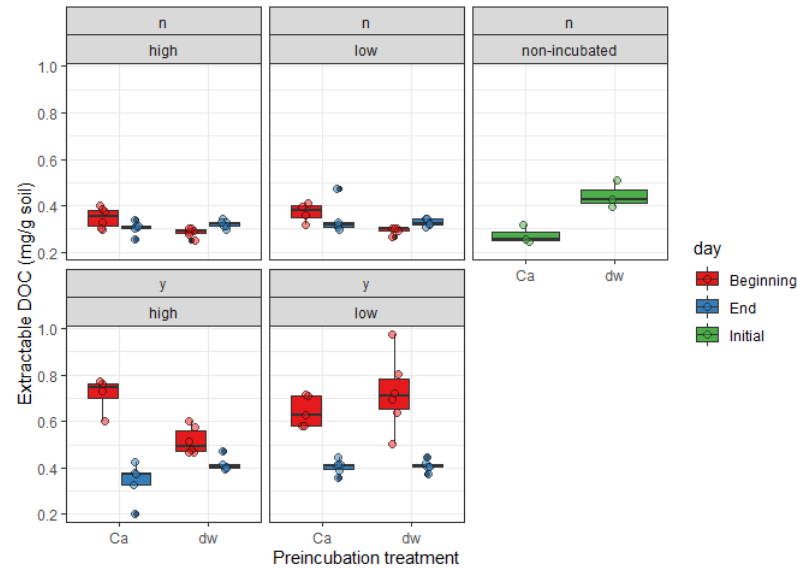


- K₂SO₄ 0.05 M Extractable DOC
- Microbial biomass C
- Extracted and fumigated C

K₂SO₄ 0.05 M Extractable DOC

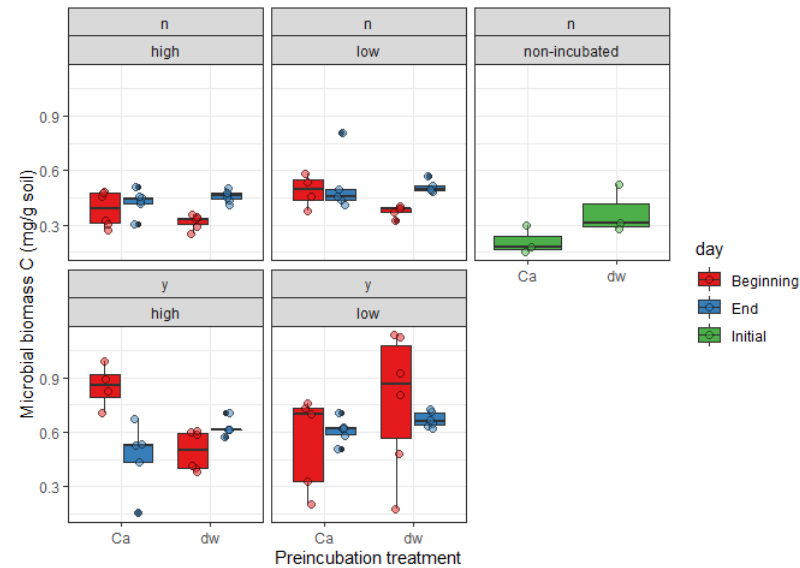


1. DOC was higher at the beginning than at the end of the incubation when litter was added, probably as a result of litter decomposition. When no litter was added, DOC was similar at the beginning and end of the incubation.
2. Ca preincubation increased the early stage DOC concentration relative to the DW preincubation, except for the low water content+litter treatment. Perhaps because the water content was not high enough to sustain the amount of activity the led to the decrease in DOC. This is surprising, as Ca is thought to involve binding of DOC to minerals and reduce its availability. Here, Ca may have mediated microbial activity (?)
3. At the end of the experiment DOC did not differ between water contents or preincubation treatment for the litter (~0.4 mg C/g soil) and no litter (~0.3 mg C/g soil).
4. In the non-incubated controls, Ca preincubation treatment decreased DOC concentration compared to preincubation with DW. This could suggest the hypothesized role of Ca in DOC binding. Even though, DOC in the incubated soil was often higher in the soils preincubated with Ca, dominating over DOC binding by Ca. It may even be the case that had this not been the case the differences in DOC between DW and Ca were higher. On the other hand, it could be the result of the preincubating process itself. Ca-soils had to be leached many more times to achieve the same EC, and perhaps more C was washed out as well.

Microbial biomass C

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1. When no litter was added, MBC was higher at the end of the incubation than at the beginning increased with DW preincubaion, but was not different with Ca preincubation. Thus, MBC was somewhat higher with Ca than with DW at the beginning. MBC could have increased with time as more SOC was decomposed and made available. With CA MBC was as high at the beginning of the incubation as it was in the end.
2. When litter was added at higher water content, early stage MBC in the Ca preincubated soils was higher than with DW, and then evened out. At lower water content, no differences in MBC were detected. The lack of difference in MBC and DOC in the +litter/low water content treatment may be the result of a lack of water to sustain the elevated microbial activity achieved when preincubated with Ca at higher water content.
3. MBC of Ca preincubated but non-incubated soils was lower than that of DW. Is this the result of lower extraction efficiency in the presence of elevated Ca, or did the more intensive leaching of Ca-preincubated soils remove more dissolved C and nutrients needed to sustain microbial growth.

Extracted and fumigated C

