



Supplement of

Comprehensive increase in CO₂ release by drying–rewetting cycles among Japanese forests and pastureland soils and exploring predictors of increasing magnitude

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Fig. S1

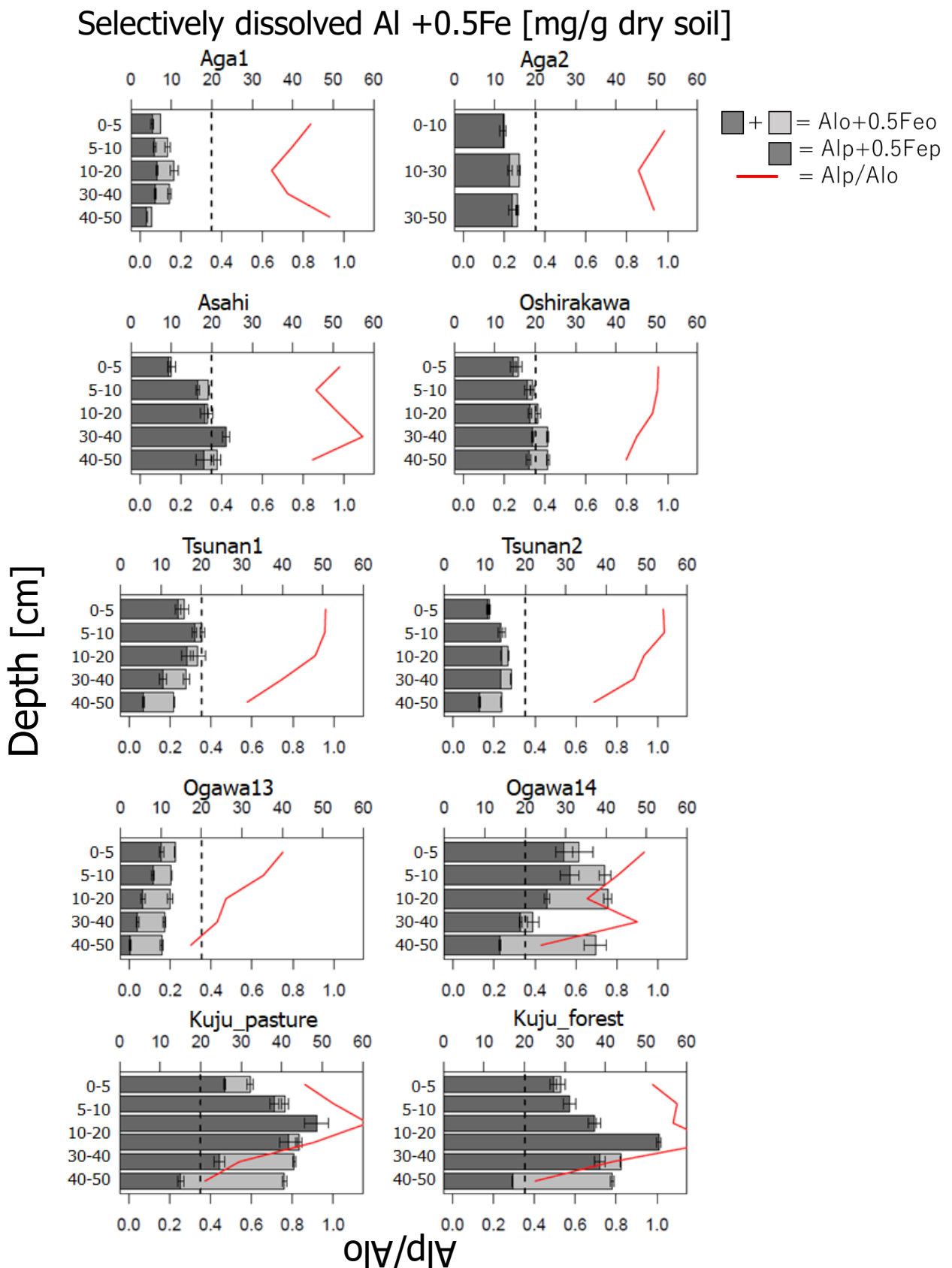


Fig. S1. Vertical profiles of selectively dissolved Al + 0.5Fe contents ($Al_o + 0.5Fe_o$, $Al_p + 0.5Fe_p$) and Al_p/Al_o for soils from 0 to 50cm depth.

Fig. S2

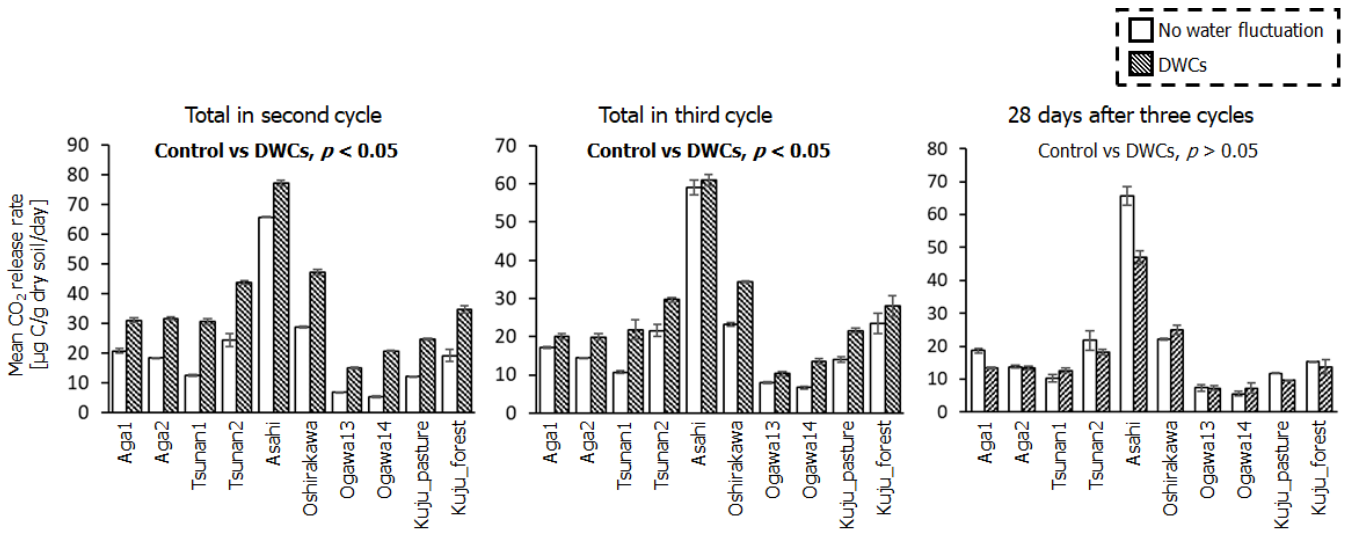


Fig. S2. Comparisons of mean CO₂ release rate for second cycle, third cycle, and the post 28-days incubation after the three cycles between DWCs and continuously constant moisture conditions. Statistically significant differences ($p < 0.05$ by pairwise t-test) in CO₂ release rate between two treatments were also presented.

Fig. S3

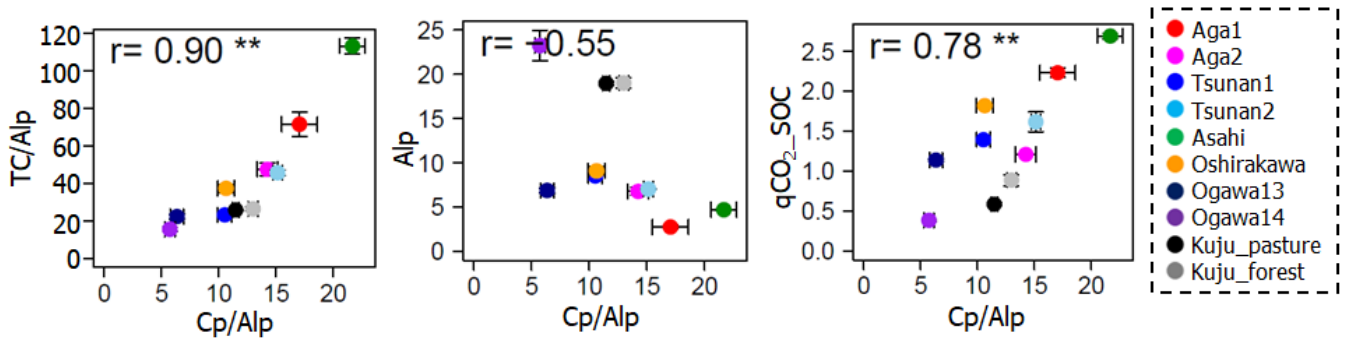


Fig. S3. Relations among soil Alp contents, Cp to Alp molar ratio, and qCO_2_soc . Statistically significant correlation coefficients at $p < 0.01$ and $p < 0.05$ are presented with single (*) and double asterisks (**), respectively.

Fig. S4

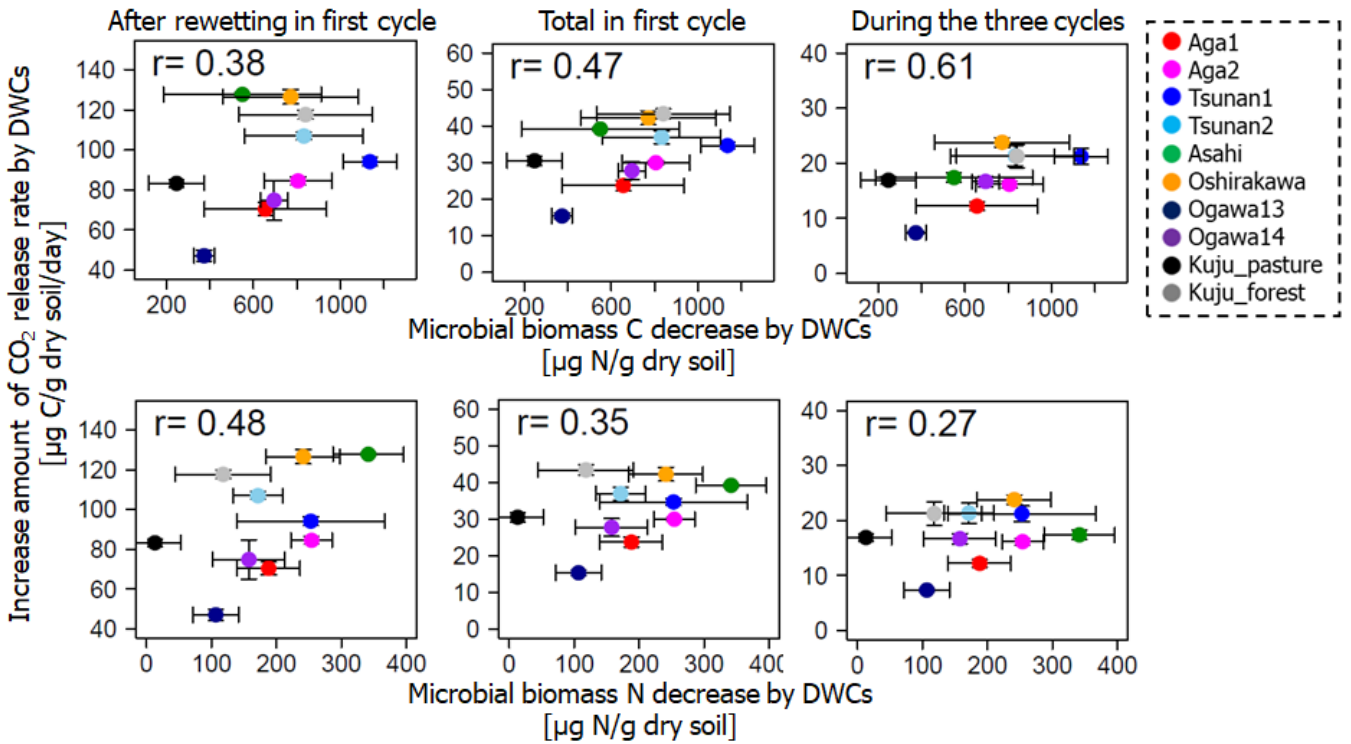


Fig. S4. Relations between the amount of CO₂ release increase and the microbial biomass C or N decrease by dry-wet cycles. There was no relationship showing significant correlation ($p > 0.05$).