

Characterizing soil organic carbon spatial and seasonal variability using Rock-Eval and CO₂/O₂ fluxes measurements

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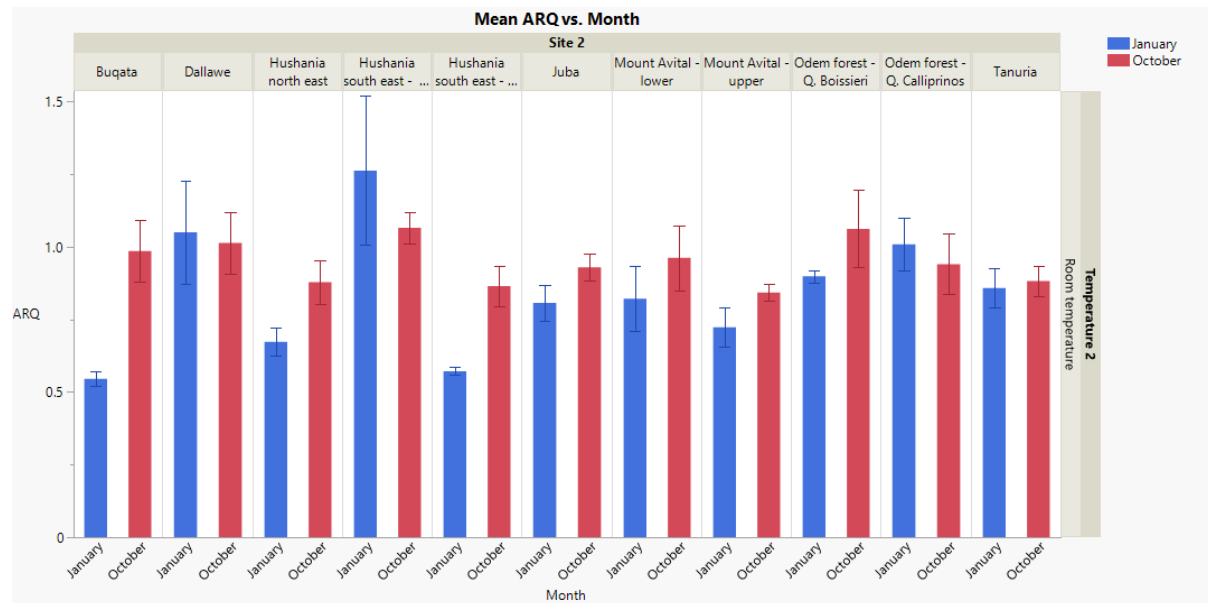


Figure S1 - Golan incubations – Room temperature. ARQ by month.

Table S1 ARQ in the Northern and southern slopes in Mt. Baron. No significant difference between treatments ($P > 0.05$).

Temperature	Slope	Mean	Std Err
4-6°C	North	0.65	0.025
	South	0.64	0.031
22-24°C	North	0.88	0.018
	South	0.87	0.019
33°C	North	1.01	0.039
	South	0.99	0.039
43°C	North	1.04	0.028
	South	1.05	0.027

Table S2 O₂ uptake rates (nmol g⁻¹ fresh soil s⁻¹) in the northern and southern slopes in Mt. Baron. No significant difference between treatments (P>0.05).

Temperature	Slope	Mean	Std Err
4-6°C	North	0.02	0.002
	South	0.01	0.001
22-24°C	North	0.10	0.012
	South	0.09	0.011
33°C	North	0.20	0.034
	South	0.20	0.024
43°C	North	0.26	0.032
	South	0.27	0.027

Table S3 CO₂ efflux (nmol g⁻¹ fresh soil s⁻¹) in the northern and southern slopes in Mt. Baron. No significant difference between treatments (P>0.05).

Temperature	Slope	Mean	Std Err
4-6°C	North	0.01	0.002
	South	0.01	0.001
22-24°C	North	0.08	0.009
	South	0.08	0.009
33°C	North	0.20	0.034
	South	0.19	0.024
43°C	North	0.28	0.036
	South	0.28	0.028

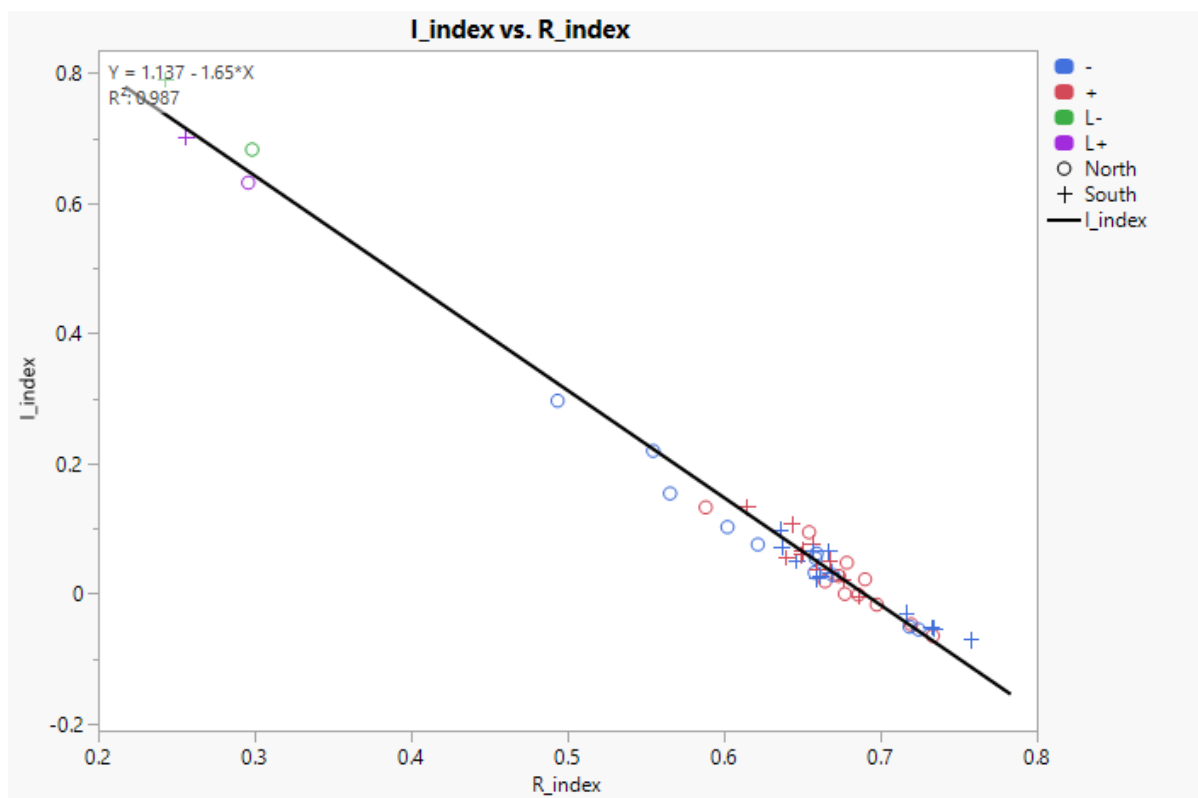


Figure S2 I index to R index in Mt. Baron soil in open grassland (-), under canopy (+), and in litter in open grassland (L-) and under canopy (L+) in the northern and southern slopes

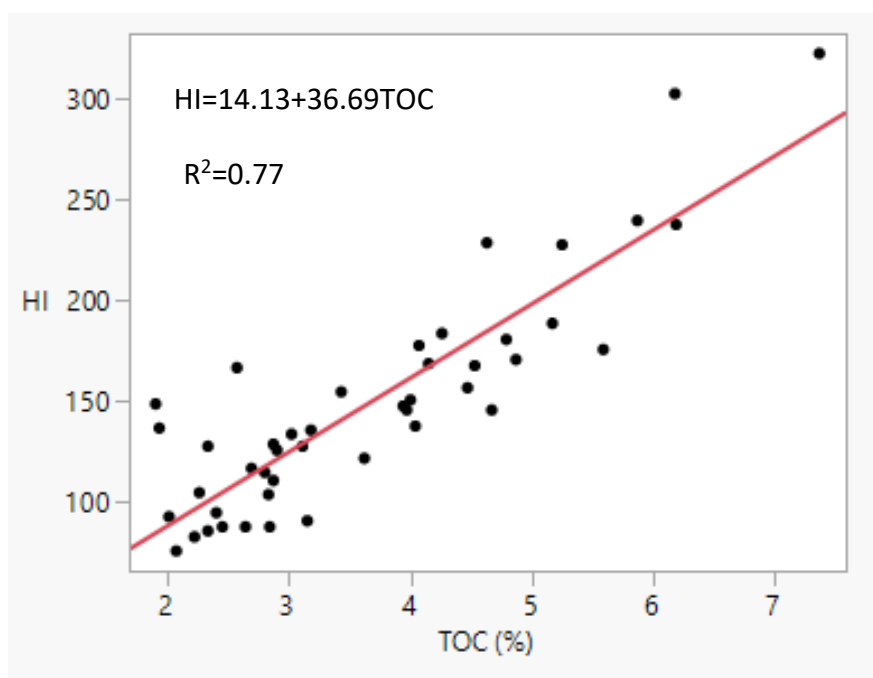


Figure S3 HI to TOC in Mt. Baron soil.

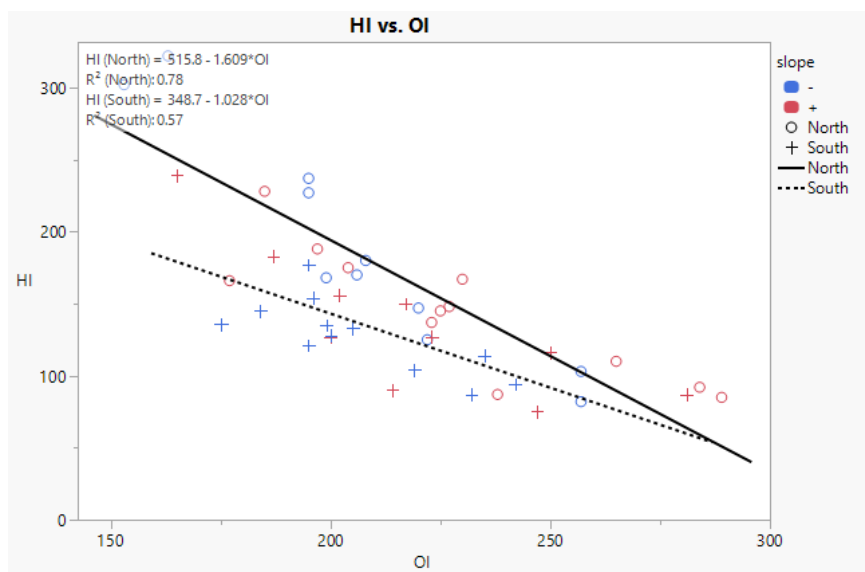


Figure S4 HI to OI in Mt. Baron soil in open grassland (-) and under canopy (+) in the northern and southern slopes.

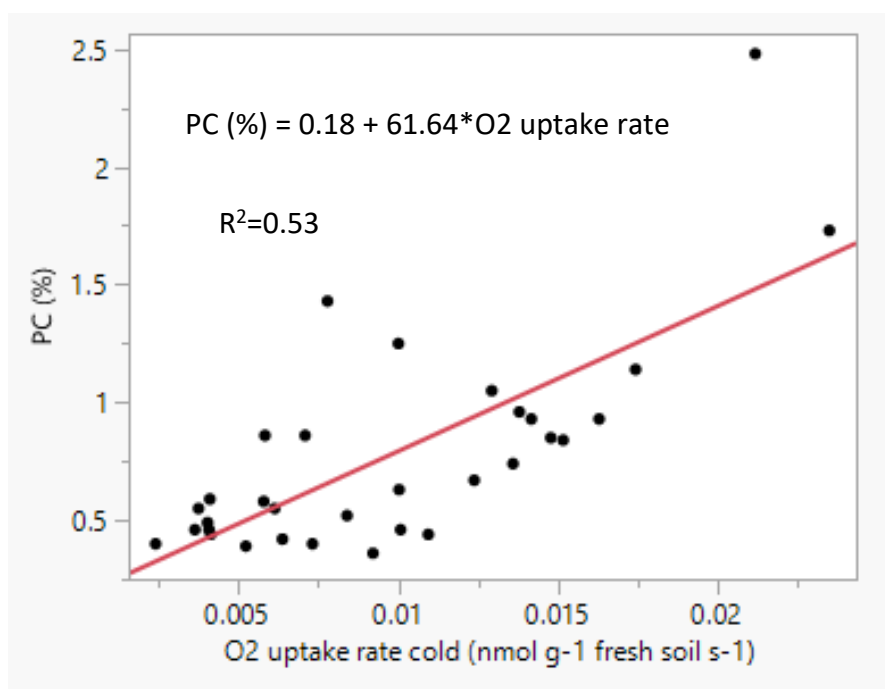


Figure S5 PC to O_2 uptake rate in the cold incubation Mt. Baron soil.

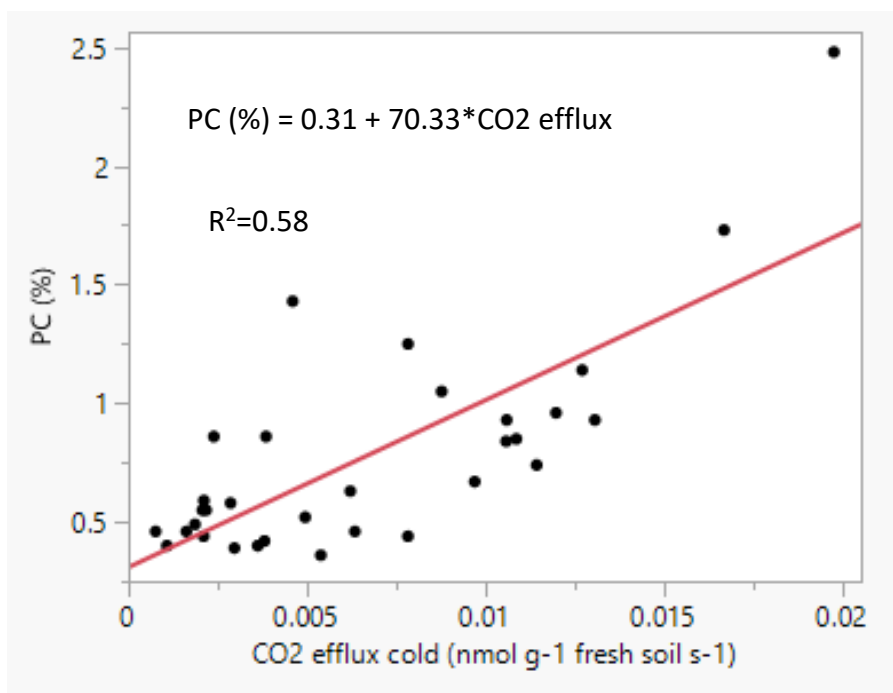


Figure S6 PC to CO₂ efflux in the cold incubation in Mt. Baron.

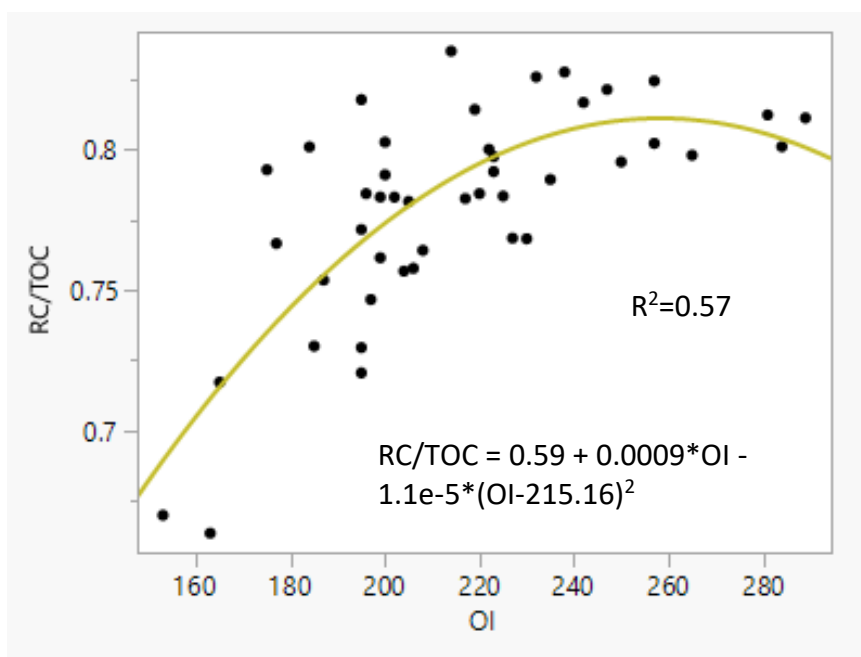


Figure S7 RC/TOC to OI in Mt. Baron soil.

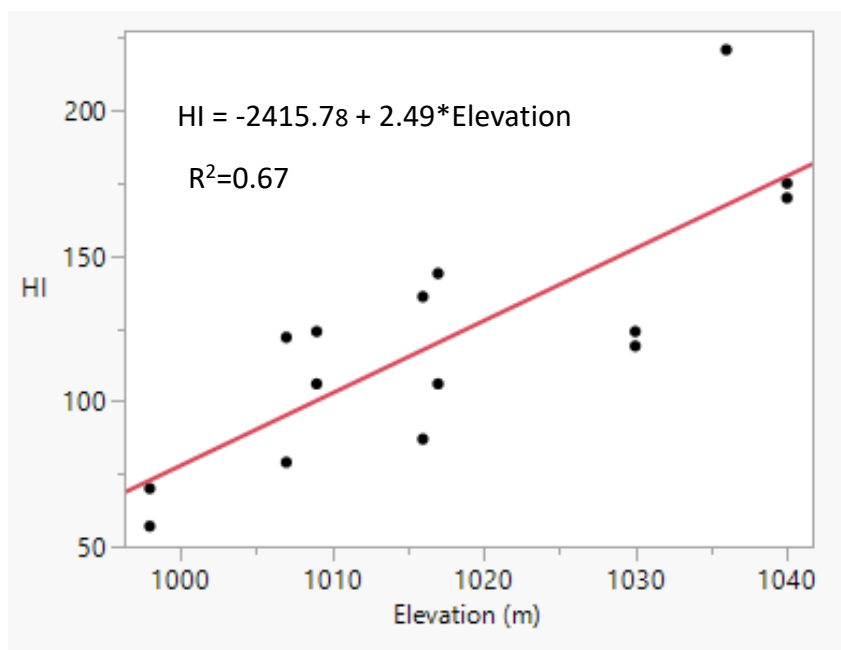


Figure S8 HI to elevation in the MAOM fraction in Mt. Baron soil.

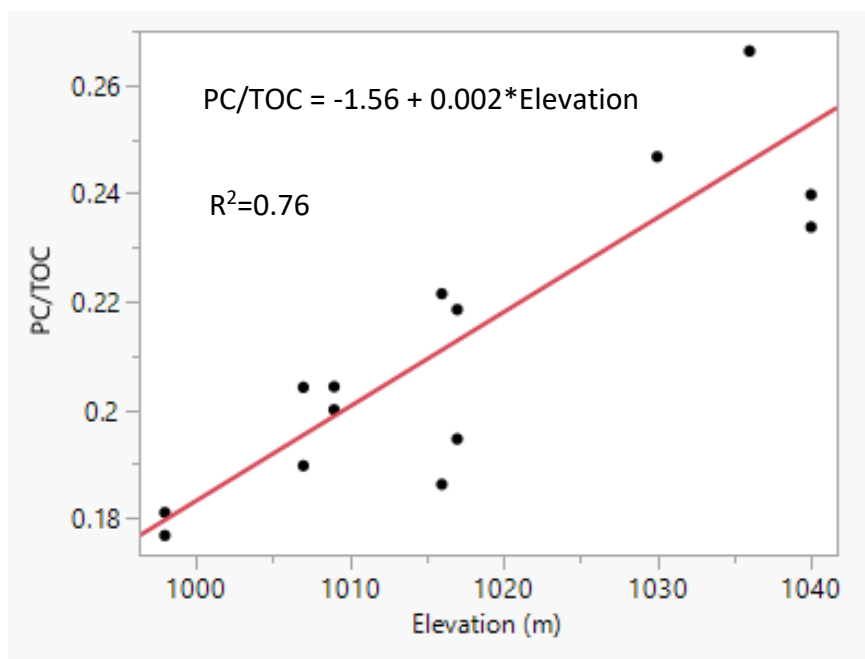


Figure S9 PC/TOC to elevation in the MAOM fraction in Mt. Baron soil.

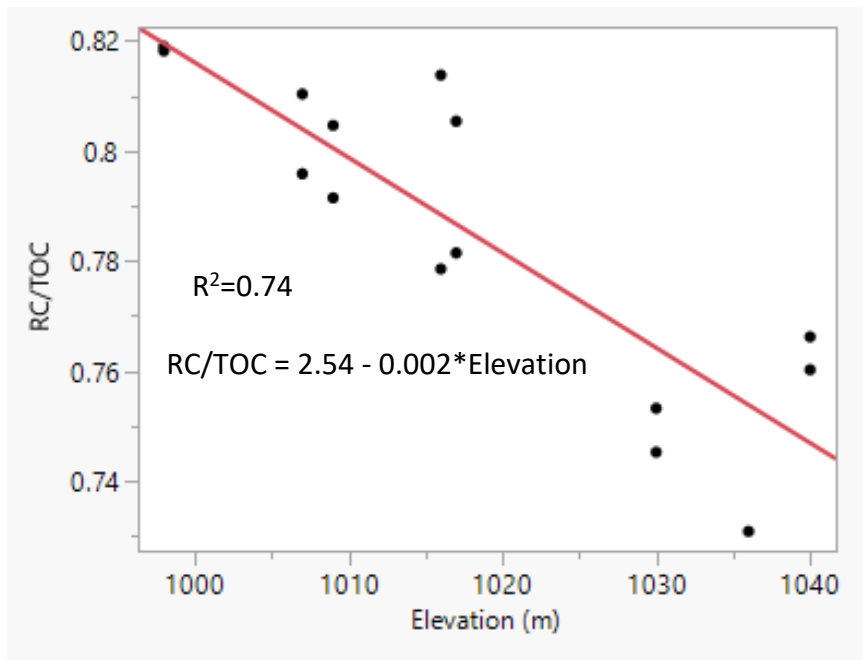


Figure S10 RC/TOC to elevation in the MAOM fraction in Mt. Baron soil.

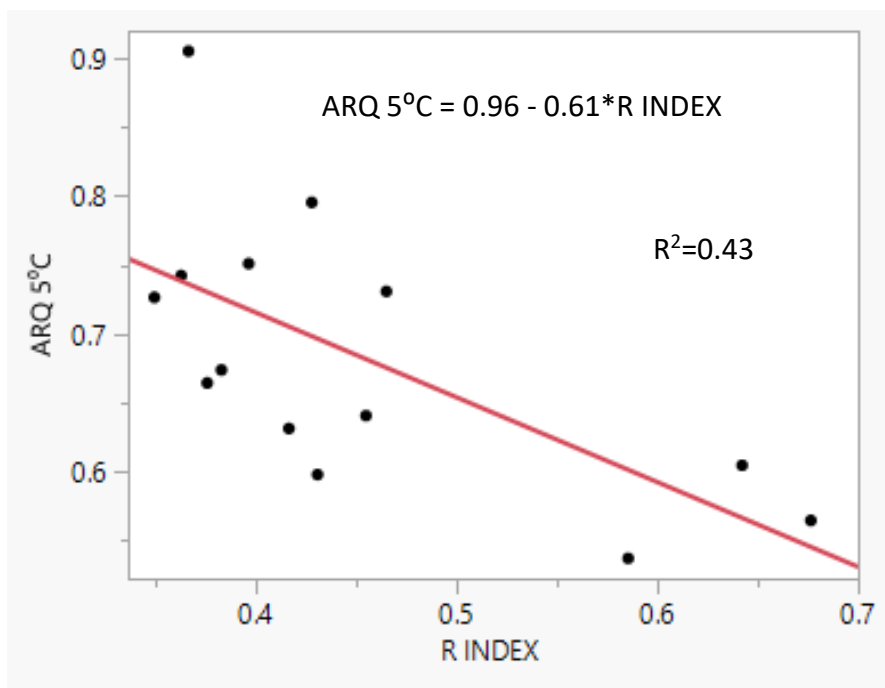


Figure S11 ARQ in the cold incubation to R index in the POM fraction in Mt. Baron.

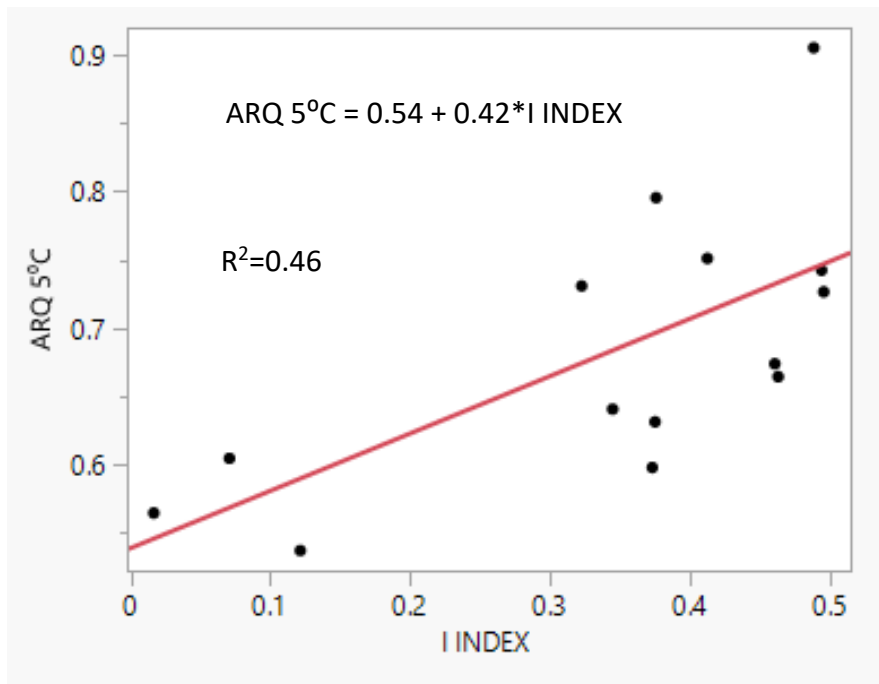


Figure S12 ARQ in the cold incubation to I index in the POM fraction in Mt. Baron.

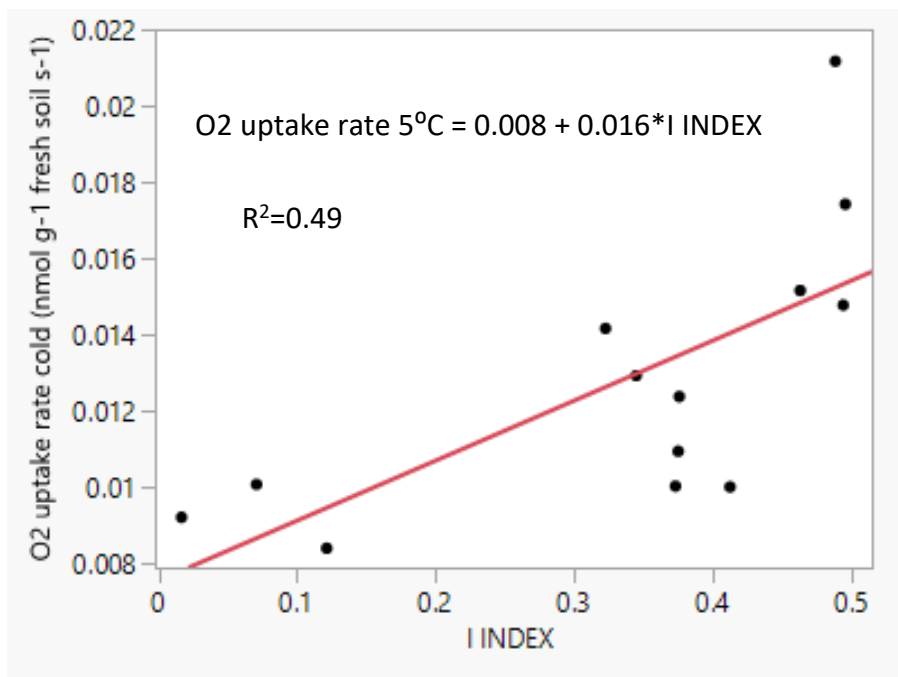


Figure S13 O₂ uptake rate in the cold incubation to I index in the POM fraction in Mt. Baron.

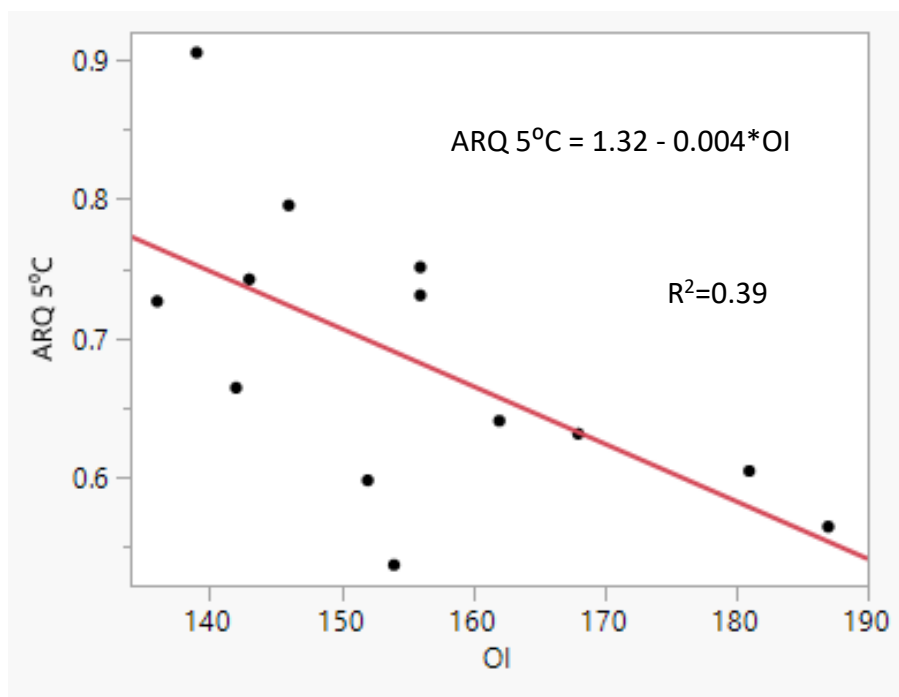


Figure S14 ARQ in the cold incubation to OI in the POM fraction in Mt. Baron.

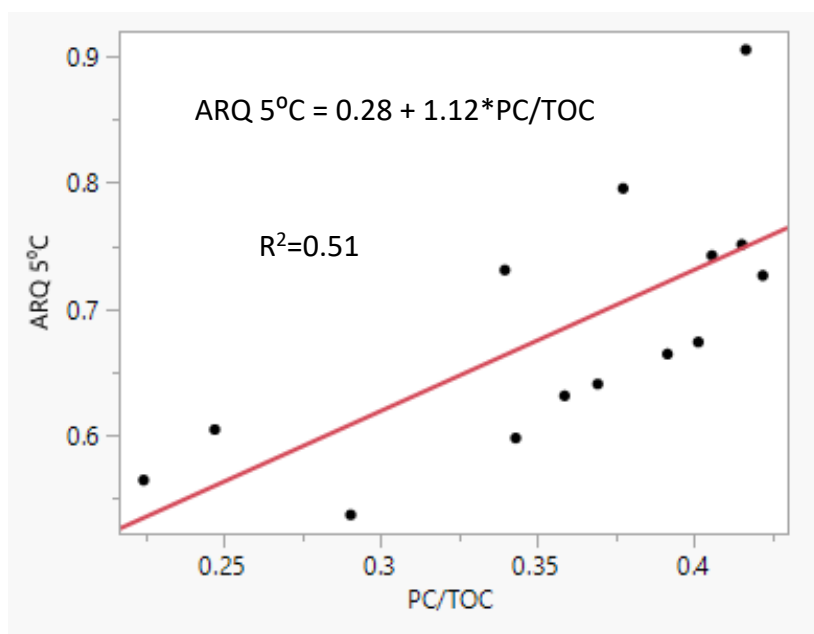


Figure S15 ARQ in the cold incubation to PC/TOC in the POM fraction in Mt. Baron.

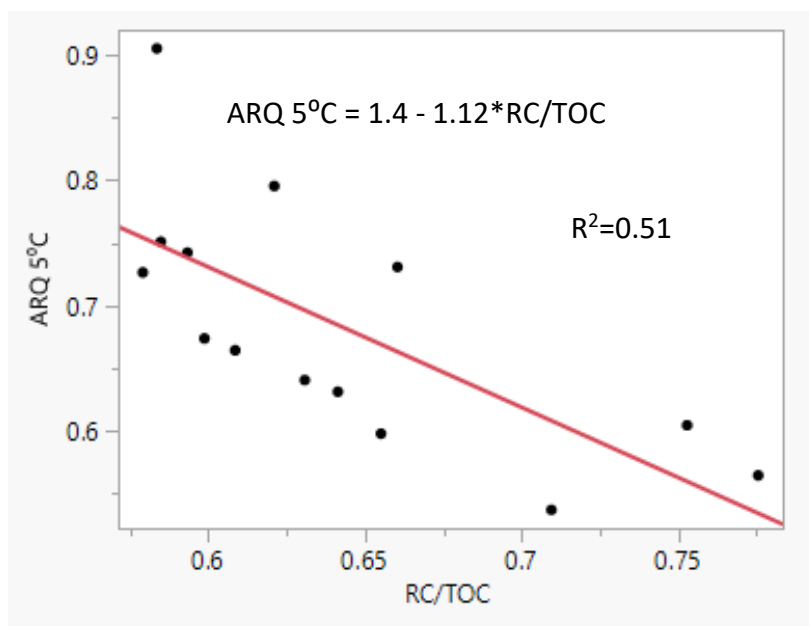


Figure S16 ARQ in the cold incubation to RC/TOC in the POM fraction in Mt. Baron.

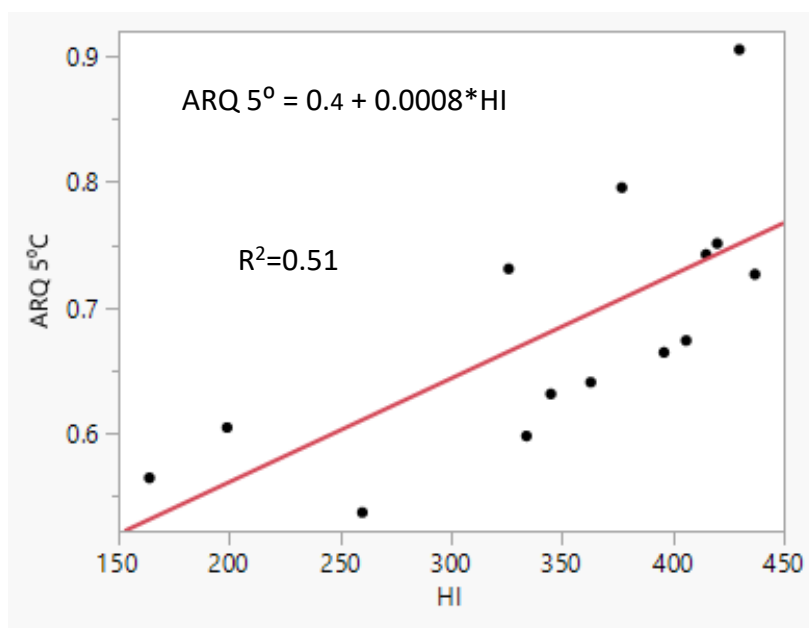


Figure S17 ARQ in the cold incubation to HI in the POM fraction in Mt. Baron.

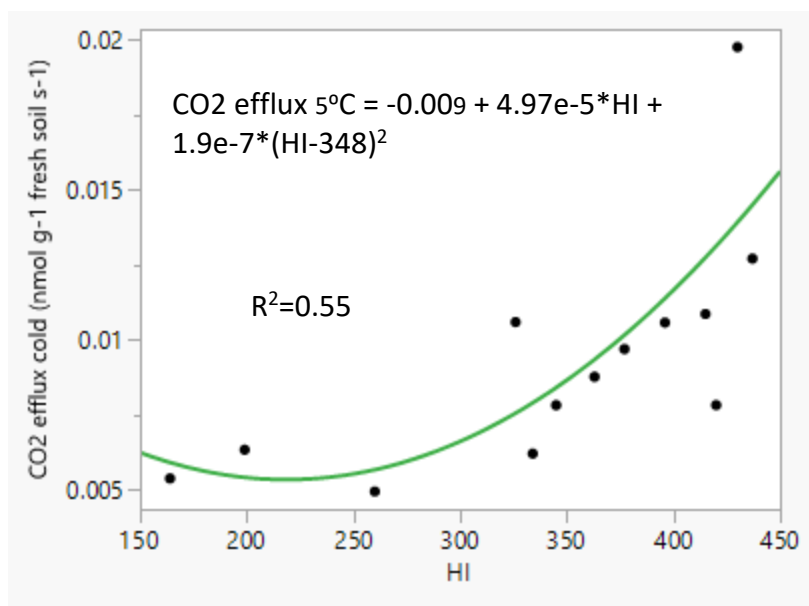


Figure S18 CO₂ efflux in the cold incubation to HI in the POM fraction in Mt. Baron.