Table S1. Correlation between soil respiration (by depths) and evaluated variables (continues)

System	Depth		SMB_{10}	SMB_{20}	SMB_{30}	SMB	SOM_{10}	SOM_{20}	SOM_{30}	TBC	CPC	RBC	PBC
RCS	0-10	Coef.-C	-0.50	1	-0.87	-0.50	1	1	-0.50	-1	1	0.87	0.50
		P-value	0.48	*	0.22	0.48	*	*	0.48	*	*	0.22	0.48
	10-20	Coef.-C	0.50	-1	0.87	0.50	-1	-1	0.50	1	-1	-0.87	-0.50
		P-value	0.48	*	0.22	0.48	*	*	0.48	*	*	0.22	0.48
	20-30	Coef.-C	0.50	-1	0.87	0.50	-1	-1	0.50	1	-1	-0.87	-0.50
		P-value	0.48	*	0.22	0.48	*	*	0.48	*	*	0.22	0.48
IPCS	0-10	Coef.-C	-1	-0.50	-0.87	-1	1	1	1	-1	0.50	0.50	0.50
		P-value	*	0.48	0.22	*	*	*	*	*	0.48	0.48	0.48
	10-20	Coef.-C	0.50	1	0	0.50	-0.50	-0.50	-0.50	0.50	0.50	0.50	0.50
		P-value	0.48	*	1	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
	20-30	Coef.-C	0.50	-0.50	0.87	0.50	-0.50	-0.50	-0.50	0.50	-1	-1	-1
		P-value	0.48	0.48	0.22	0.48	0.48	0.48	0.48	0.48	*	*	*
CAS	0-10	Coef.-C	-0.87	-	-	-0.87	0.50	-1	-0.50	-0.50	0.50	0.50	1
		P-value	0.22	-	-	0.22	0.48	*	0.48	0.48	0.48	0.48	*
	10-20	Coef.-C	-0.87	-	-	-0.87	-0.50	-0.50	-1	-1	-0.50	1	0.50
		P-value	0.22	-	-	0.22	0.48	0.48	*	*	0.48	*	0.48
	20-30	Coef.-C	-0.87	-	-	-0.87	0.50	-1	-0.50	-0.50	0.50	0.50	1
		P-value	0.22	-	-	0.22	0.48	*	0.48	0.48	0.48	0.48	*
CAO	0-10	Coef.-C	0	-	-	0	-1	-1	-0.50	0.50	-	0.50	0.50
		P-value	1	-	-	1	*	*	0.48	0.48	-	0.48	0.48
	10-20	Coef.-C	0	-	-	0	1	1	0.50	-0.50	-	-0.50	-0.50
		P-value	1	-	-	1	*	*	0.48	0.48	-	0.48	0.48
	20-30	Coef.-C	-0.87	-	-	-0.87	-0.50	-0.50	-1	-0.50	-	-0.50	-0.50
		P-value	0.22	-	-	0.22	0.48	0.48	*	0.48	-	0.48	0.48

SMB: Soil macrofauna (biomass of organisms accumulated at 0-30 cm depth); SOM: Soil organic matter; TBC: C in trees; CPC: C in coffee plants; RBC: C in roots; PBC: C in plant biomass; Depth in cm; *Coef.*-C: *Spearman's* correlation coefficient; *Significance $p \leq 0.05$. RCS: renovated coffee agroforestry system, IPCS: coffee agroforestry system with intensive pruning, CAS: Coffee agroforestry system with the introduction of avocado, CAO: Avocado orchard system.

Table S2. Correlation between soil respiration (by depths) and variables (continues).

System	Depth		C-L*L*	C-L*F*	C_{10}	C_{20}	C_{30}	SOC	N-L*L*	N-L*F*
RCS	0-10	Coef,-C	1	1	0.50	0.50	-0.50	0.50	1	1
		P-value	*	*	0.48	0.48	0.48	0.48	*	*
	10-20	Coef.-C	-1	-1	-0.50	-0.50	0.50	-0.50	-1	-1
		P-valor	*	*	0.48	0.48	0.48	0.48	*	*
	20-30	Coef.-C	-1	-1	-0.50	-0.50	0.50	-0.50	-1	-1
		P-value	*	*	0.48	0.48	0.48	0.48	*	*
IPCS	0-10	Coef.-C	-1	1	0.50	1	0.50	0.50	-0.50	1
		P-value	*	*	0.48	*	0.48	0.48	0.48	*
	10-20	Coef.-C	0.50	-0.50	-1	-0.50	-1	-1	-0.50	-0.50
		P-value	0.48	0.48	*	0.48	*	*	0.48	0.48
	20-30	Coef.-C	0.50	-0.50	0.50	-0.50	0.50	0.50	1	-0.50
		P-value	0.48	0.48	0.48	0.48	0.48	0.48	*	0.48
CAS	0-10	Coef.-C	-1	-	1	0.50	-0.50	0.50	-1	-
		P-value	*	-	*	0.48	0.48	0.48	*	-
	10-20	Coef.-C	-0.50	-	0.50	1	0.50	1	-0.50	-
		P-value	0.48	-	0.48	*	0.48	*	0.48	-
	20-30	Coef.-C	-1	-	1	0.50	-0.50	0.50	-1	-
		P-value	*	-	*	0.48	0.48	0.48	*	-
CAO	0-10	Coef.-C	0.50	-	-0.50	-1	-1	-1	1	-
		P-value	0.48	-	0.48	*	*	*	*	-
	10-20	Coef.-C	-0.50	-	0.50	1	1	1	-1	-
		P-value	0.48	-	0.48	*	*	*	*	-
	20-30	Coef.-C	-0.50	-	-1	-0.50	-0.50	-0.50	0.50	-
		P-value	0.48	-	*	0.48	0.48	0.48	0.48	-

C-L*L*: C in layer *L* or litter; C-L*F:* C in layer *F* or mulch; C_{10}: carbon 0-10 cm of depth; C_{20}: carbon 10 -20 cm of depth; C_{30}: carbon 20-30 cm of depth; SOC: soil organic C (accumulated at the depth of 0-30 cm); N-L*L*: N in layer *L* or litter; N-L*F:* N in layer *F* or mulch; Depth in cm; *Coef.*-C: *Spearman's* correlation coefficient; *Significance $p \leq 0.05$. RCS: renovated coffee agroforestry system, IPCS: coffee agroforestry system with intensive pruning, CAS: Coffee agroforestry system with the introduction of avocado, CAO: Avocado orchard system.

Table S3. Correlation between soil respiration (by depths) and evaluated variables (conclude)

System	Depth		N_{10}	N_{20}	N_{30}	STN	C-L*L* /N-L*L*	C-L*F* /N- L*F*	C_{10}/N_{10}	C_{20}/N_{20}	C_{30}/N_{30}	C/N
RCS	0-10	Coef.-C	0.50	-0.50	0.50	0.50	0.50	1	-0.50	0.50	-0.50	-0.50
		P-value	0.48	0.48	0.48	0.48	0.48	*	0.48	0.48	0.48	0.48
	10-20	Coef.-C	-0.50	0.50	-0.50	-0.50	-0.50	-1	0.50	-0.50	0.50	0.50
		P-value	0.48	0.48	0.48	0.48	0.48	*	0.48	0.48	0.48	0.48
	20-30	Coef.-C	-0.50	0.50	-0.50	-0.50	-0.50	-1	0.50	-0.50	0.50	0.50
		P-value	0.48	0.48	0.48	0.48	0.48	*	0.48	0.48	0.48	0.48
IPCS	0-10	Coef.-C	-0.50	-0.50	-0.50	-0.50	-0.50	1	1	0.50	1	1
		P-value	0.48	0.48	0.48	0.48	0.48	*	*	0.48	*	*
	10-20	Coef.-C	-0.50	-0.50	-0.50	-0.50	1	-0.50	-0.50	0.50	-0.50	-0.50
		P-value	0.48	0.48	0.48	0.48	*	0.48	0.48	0.48	0.48	0.48
	20-30	Coef.-C	1	1	1	1	-0.50	-0.50	-0.50	-1	-0.50	-0.50
		P-value	*	*	*	*	0.48	0.48	0.48	*	0.48	0.48
CAS	0-10	Coef.-C	0.50	0.50	0.50	0.50	1	-	0.50	-0.50	-1	-1
		P-value	0.48	0.48	0.48	0.48	*	-	0.48	0.48	*	*
	10-20	Coef.-C	-0.50	1	1	1	0.50	-	1	-1	-0.50	-0.50
		P-value	0.48	*	*	*	0.48	-	*	*	0.48	0.48
	20-30	Coef.-C	0.50	0.50	0.50	0.50	1	-	0.50	-0.50	-1	-1
		P-value	0.48	0.48	0.48	0.48	*	-	0.48	0.48	*	*
CAO	0-10	Coef.-C	1	0.50	-0.50	0.50	0.50	-	-0.50	-0.50	-0.50	-0.50
		P-value	*	0.48	0.48	0.48	0.48	-	0.48	0.48	0.48	0.48
	10-20	Coef.-C	-1	-0.50	0.50	-0.50	-0.50	-	0.50	0.50	0.50	0.50
		P-value	*	0.48	0.48	0.48	0.48	-	0.48	0.48	0.48	0.48
	20-30	Coef.-C	0.50	1	0.50	1	-0.50	-	-1	-1	-1	-1
		P-value	0.48	*	0.48	*	0.48	-	*	*	*	*

N_{10}:nitrogen 0-10 cm of depth; N_{20}: nitrogen 10 -20 cm of depth; N_{30}: nitrogen 20-30 cm of depth; STN: soil total N; N-L*L*: N in layer *L* or litter; N-L*F:* N in layer *F* or mulch; C/N: Soil carbon/nitrogen ratio; Depth in cm; *Coef*-C: *Spearman's* correlation coefficient; *Significance $p \leq 0.05$. RCS: renovated coffee agroforestry system, IPCS: coffee agroforestry system with intensive pruning, CAS: Coffee agroforestry system with the introduction of avocado, CAO: Avocado orchard system.