Supplementary Materials

Shrestha et al. (2020). Adaptive Multi-Paddock Grazing Lowers Soil Greenhouse Gas Emission Potential by Altering Extracellular Enzyme Activity

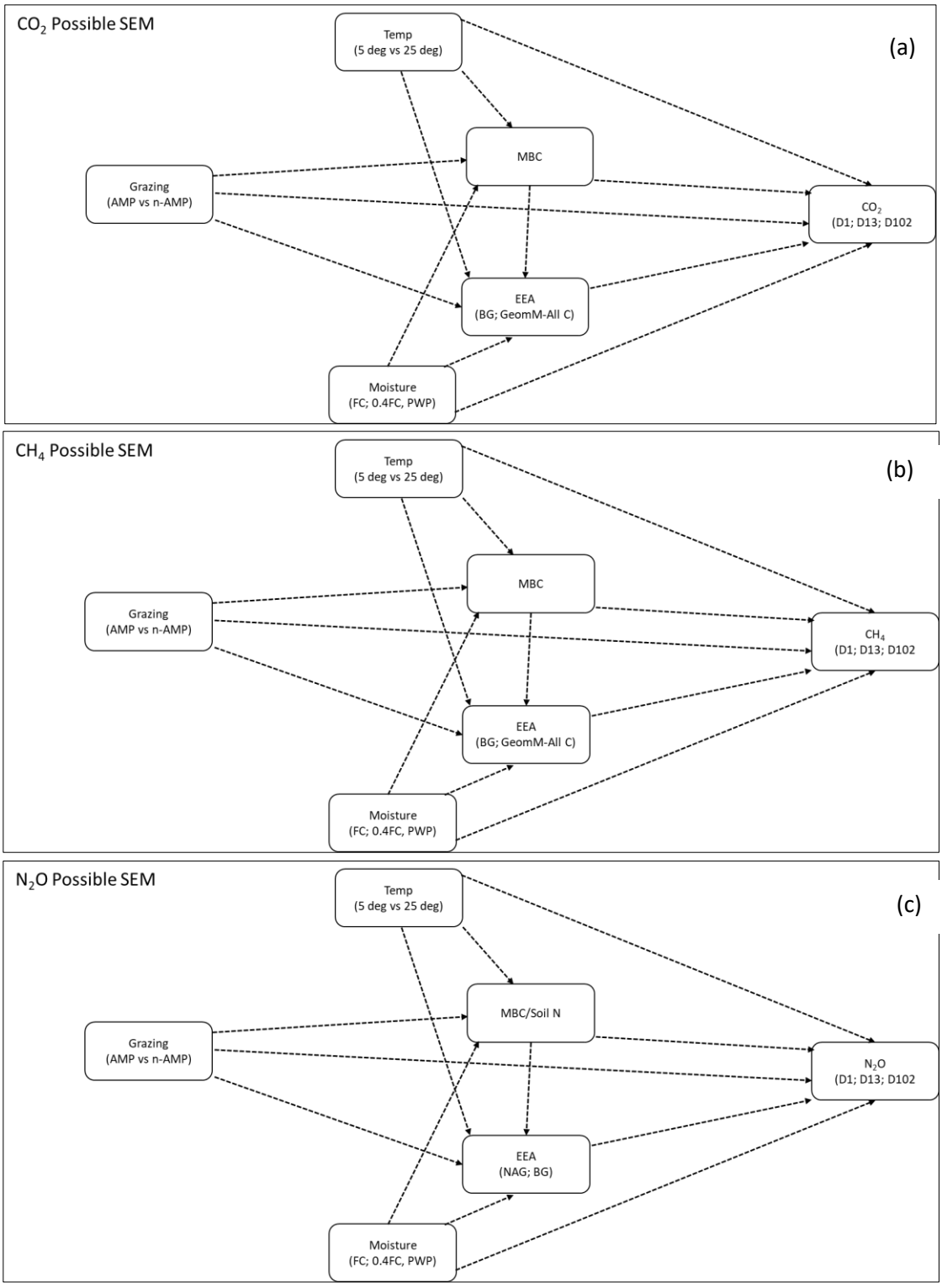

Fig. S1. Conceptual SEM models for determining effects of grazing treatments, soil temperature and moisture on microbes and resultant fluxes of (a) CO_2, (b) CH_4 and (c) N_2O during the incubation experiment.

Table S1: Summary of soil physical and chemical properties for studied grasslands.

Grazing	Town	BD ($g\ cm^{-3}$)	Sand (%)	Silt	Clay	pH	SOC ($g\ kg^{-1}$)	TN	C:N ratio	PWP (%)	FC
AMP	Duchess	0.99	90.5	7.2	2.3	5.53	16.2	2.1	7.7	6.4	17.2
	Alix	0.92	44.6	31.3	24.1	6.97	41.3	4.1	10.0	15.6	35.5
	Vermillion	0.96	42.9	30.9	26.3	5.28	38.5	3.8	10.1	18.8	39.8
	Kitscoty	0.97	33.0	44.0	23.0	5.14	47.5	4.4	10.7	18.1	40.9
	Penhold	0.74	37.0	35.1	27.9	5.62	66.6	5.9	11.3	23.9	46.2
	Cremona	0.81	17.9	51.4	30.7	7.21	65.2	5.8	11.2	23.1	47.2
	Nanton	0.65	24.1	35.4	40.6	5.44	83.7	7.5	11.2	31.7	58.3
	Busby	0.90	42.7	48.7	8.7	5.67	40.6	3.6	11.2	13.9	41.3
	Eckville	0.90	40.3	39.0	20.7	6.45	68.2	5.6	12.2	27.1	49.3
	RMH*	0.77	29.2	48.9	21.8	5.48	57.7	4.6	12.5	21.5	47.9
	Nanton	0.47	26.5	32.3	41.2	5.20	80.2	7.2	11.2	31.1	49.7
Non-AMP	Duchess	1.04	90.1	5.8	4.1	5.60	15.1	2.7	5.5	4.8	21.4
	Alix	0.76	42.5	33.9	23.6	5.66	68.5	6.0	11.3	22.4	49.9
	Vermillion	1.03	36.4	31.5	32.1	5.61	30.5	3.1	9.7	15.2	36.9
	Kitscoty	0.97	43.4	34.2	22.4	4.99	39.1	3.7	10.6	15.2	36.1
	Penhold	0.76	42.4	38.5	19.1	7.60	73.6	5.9	12.5	23.9	50.2
	Cremona	0.82	31.9	34.9	33.2	6.74	46.5	4.5	10.4	16.8	40.3
	Nanton	0.56	30.9	35.0	34.0	6.76	78.9	7.2	10.9	28.5	54.6
	Busby	0.98	46.8	39.6	13.7	6.85	45.1	3.6	12.7	13.7	50.4
	Eckville	0.87	34.1	40.6	25.3	6.60	77.0	6.2	12.3	26.8	46.9
	RMH	0.89	33.8	41.3	25.0	6.91	40.3	3.3	12.4	15.6	40.3
	Nanton	0.47	30.5	35.9	33.6	5.50	122.7	10.1	12.1	40.2	64.0
AMP	Mean (SE)	0.83 (0.05)	39.0 (5.8)	36.7 (3.7)	24.3 (3.5)	5.82 (0.22)	55.1 (6.1)	5.0 (0.5)	10.9 (0.4)	21.0 (2.3)	43.0 (3.2)
Non-AMP		0.83 (0.06)	42.1 (5.1)	33.7 (2.9)	24.2 (2.8)	6.26 (0.24)	57.9 (9.0)	5.1 (0.7)	11.0 (0.6)	20.3 (2.8)	44.6 (3.4)
	Significance	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns

AMP= adaptive multi-paddock grazing, Non-AMP = conventional grazing, BD = soil bulk density, SOC = total soil organic carbon, TN = total nitrogen, C: N = C to N ratio (unit less), PWP = permanent wilting point, FC = field capacity, *RMH = Rocky Mountain House

Table S2. Summary of ANOVA, including degree of freedom (*df*), *F- and P-* values, for the enzyme activities studied during a 102-day incubation. Enzyme activities were analyzed for day 1, 13, and 102 of the incubation. *P*-values shown in bold are ⩽ 0.05.

		Enzyme[1]							
		Cello		**Xylo**		**BAG**		**NAC**	
Fixed effect	***Degrees of freedom***	F-val[2]	P-val	F-val	P-val	F-val	P-val	F-val	P-val
Grazing (G)	1, 10	4.57	0.058	0.24	0.64	0.78	0.40	3.75	0.08
Temperature (T)	1, 100	0.68	0.41	0.00	0.99	1.80	0.18	3.87	0.052
Moisture (M)	2, 100	120.61	**0.002**	7.93	**0.001**	10.97	**<0.001**	0.80	0.45
Incubation Day (D)	2, 240	0.27	0.76	0.52	0.60	0.43	0.65	3.13	**0.045**
G × T	1, 100	1.82	0.18	1.39	0.24	1.35	0.25	1.94	0.17
G × M	2, 100	0.04	0.96	0.11	0.89	0.06	0.94	0.28	0.76
T × M	2, 100	0.07	0.93	0.11	0.90	0.04	0.97	0.09	0.92
G × D	2, 240	3.79	**0.024**	0.02	0.98	3.80	**0.024**	12.65	**<0.001**
T × D	2, 240	0.840	0.43	4.08	**0.0181**	0.89	0.41	0.33	0.72
M × D	4, 240	0.255	0.90	0.68	0.61	0.56	0.69	0.08	0.99
G × M × T	2, 100	0.75	0.47	0.33	0.72	0.41	0.67	0.09	0.92
G × T × D	2, 240	11.55	<**0.001**	1.16	0.32	11.81	**<0.001**	21.07	**<0.001**
G × M × D	4, 240	0.18	0.94	0.10	0.98	0.32	0.87	0.04	1.00
T × M × D	4, 240	0.13	0.97	0.57	0.68	0.07	0.99	0.22	0.93
G × T × M × D	4, 240	0.40	0.80	0.37	0.83	0.21	0.93	0.07	0.99

[1] Enzymes: Cello = Cellobiosidase, Xylo = Xylosidase, BAG = β-glucosidase, NAC = N-acetyl glucosaminidase

[2]val=value

Table S3. Summary of ANOVA, including degrees of freedom (*df*), *F- and P-* values, for the GHGs studied during a 102-day incubation. Fluxes of GHGs were analyzed for day 1, 13, and 102 of the incubation. *P*-values in bold are ≤ 0.05.

		GHGs					
	Degrees of	**CO_2**		**CH_4**		**N_2O**	
Fixed effects	***freedom***	F-value	P-value	F-value	P-value	F-value	P-value
Grazing (G)	1, 10	0.01	0.91	4.43	**0.036**	51.05	**<0.001**
Temperature (T)	1, 100	412.02	**<0.001**	2.90	0.12	11.99	**<0.001**
Moisture (M)	2, 100	74.51	**<0.001**	113.67	**<0.001**	22.83	**<0.001**
Incubation Day (D)	2, 240	235.97	**<0.001**	6.50	**0.002**	0.52	0.47
G × T	1, 100	5.47	**0.02**	2.63	0.07	0.77	0.47
G × M	2, 100	0.44	0.65	9.48	**0.003**	0.46	0.63
T × M	2, 100	43.43	**<0.001**	1.56	0.22	0.97	0.38
G × D	2, 240	0.82	0.44	3.16	**0.047**	2.98	**0.05**
T × D	2, 240	96.90	**<0.001**	3.48	**0.032**	2.87	**0.024**
M × D	4, 240	14.36	**<0.001**	101.69	**<0.001**	1.57	0.21
G × M × T	2, 100	1.18	0.31	5.40	**0.004**	0.29	0.75
G × T × D	2, 240	1.49	0.23	1.94	0.15	2.56	**0.039**
G × M × D	4, 240	1.55	0.19	25.70	**<0.001**	4.14	**0.003**
T × M × D	4, 240	5.90	**0.002**	0.56	0.69	2.80	**0.027**
G × T × M × D	4, 240	1.51	0.20	3.30	**0.012**	51.05	**<0.001**

Table S4. Summary of ANOVA, including degree of freedom (df), *F*- and *P*- values, for the studied soil microbial biomass carbon (MBC), microbial biomass nitrogen (MBN), and available nitrogen (AN) during a 102-day incubation. Enzyme activities were analyzed for day 1, 13, and 102 of the incubation. *P*-values in bold are ≤ 0.05.

		Soil parameters					
	Degree of	**MBC**		**MBN**		**AN**	
Fixed effects	***freedom***	F-value	P-value	F-value	P-value	F-value	P-value
Grazing (G)	1, 10	0.70	0.42	0.66	0.43	0.05	0.82
Temperature (T)	1, 100	0.91	0.34	0.01	0.93	12.49	**<0.001**
Moisture (M)	2, 100	0.58	0.56	8.72	**<0.001**	84.76	**<0.001**
Incubation Day (D)	2, 240	0.17	0.84	0.33	0.72	1.85	0.16
G × T	1, 100	0.38	0.53	0.28	0.59	8.06	**0.005**
G × M	2, 100	1.81	0.16	1.19	0.31	0.60	0.55
T × M	2, 100	0.11	0.89	0.51	0.60	0.05	0.95
G × D	2, 240	5.96	**0.003**	5.47	**0.004**	1.85	0.16
T × D	2, 240	1.57	0.21	4.24	**0.01**	42.87	**<0.001**
M × D	4, 240	0.17	0.95	0.27	0.89	0.26	0.90
G × M × T	2, 100	0.15	0.85	0.47	0.63	0.02	0.97
G × T × D	2, 240	1.54	0.22	0.83	0.44	1.96	0.14
G × M × D	4, 240	0.29	0.88	0.10	0.98	0.12	0.97
T × M × D	4, 240	0.24	0.91	0.91	0.46	1.00	0.41
G × T × M × D	4, 240	0.27	0.89	0.24	0.92	0.42	0.79

Table S5: Fluxes of greenhouse gases (mean ± SE) from incubated soils on selected days of measurement (1, 13 and 102) coinciding with measurements of various extracellular enzyme activities.

			CO_2-C (mg C kg^{-1} day^{-1})				CH_4-C (µg C kg^{-1} day^{-1})				N_2O-N (µg N kg^{-1} day^{-1})			
Day	Temperature	Moisture	AMP		Non-AMP		AMP		Non-AMP		AMP		Non-AMP	
1	5 ℃	PWP	0.217	± 0.045	0.204	± 0.075	-0.002	± 0.075	0.003	± 0.002	0.065	± 0.023	0.017	± 0.016
		0.4FC	0.196	± 0.030	0.142	± 0.032	-0.004	± 0.032	0.001	± 0.001	0.038	± 0.020	0.129	± 0.065
		FC	0.442	± 0.065	0.380	± 0.087	-0.003	± 0.087	0.001	± 0.003	0.133	± 0.041	0.076	± 0.027
		Mean	0.285	± 0.034	0.242	± 0.042	-0.003	± 0.042	0.002	± 0.001	0.079	± 0.018	0.074	± 0.025
	25 ℃	PWP	1.299	± 0.287	1.096	± 0.355	-0.077	± 0.355	-0.034	± 0.011	0.102	± 0.038	0.129	± 0.043
		0.4FC	1.017	± 0.154	1.334	± 0.235	-0.019	± 0.235	-0.026	± 0.009	0.113	± 0.021	0.087	± 0.074
		FC	2.667	± 0.322	3.925	± 0.665	-0.057	± 0.665	-0.025	± 0.008	0.388	± 0.062	0.460	± 0.090
		Mean	1.661	± 0.195	2.118	± 0.341	-0.051	± 0.341	-0.028	± 0.005	0.201	± 0.034	0.225	± 0.050
	Mean		0.973	± 0.130	1.180	± 0.206	-0.027	± 0.206	-0.013	± 0.003	0.140	± 0.020	0.150	± 0.029
13	5 ℃	PWP	0.136	± 0.033	0.094	± 0.028	-0.005	± 0.028	0.007	± 0.002	0.027	± 0.009	0.018	± 0.007
		0.4FC	0.095	± 0.020	0.106	± 0.028	-0.001	± 0.028	0.005	± 0.002	0.017	± 0.008	0.023	± 0.007
		FC	0.323	± 0.047	0.243	± 0.064	-0.011	± 0.064	0.002	± 0.004	0.104	± 0.037	0.077	± 0.017
		Mean	0.185	± 0.026	0.148	± 0.027	-0.006	± 0.027	0.005	± 0.002	0.049	± 0.014	0.039	± 0.008
	25 ℃	PWP	0.482	± 0.142	0.321	± 0.077	-0.163	± 0.077	-0.086	± 0.037	0.185	± 0.060	0.076	± 0.035
		0.4FC	0.377	± 0.075	0.720	± 0.185	-0.239	± 0.185	-0.076	± 0.020	0.060	± 0.013	0.245	± 0.107
		FC	1.399	± 0.106	1.756	± 0.279	-0.283	± 0.279	0.005	± 0.011	0.135	± 0.037	0.066	± 0.014
		Mean	0.753	± 0.102	0.932	± 0.154	-0.228	± 0.154	-0.052	± 0.016	0.127	± 0.025	0.129	± 0.039
	Mean		0.469	± 0.063	0.540	± 0.092	-0.117	± 0.092	-0.024	± 0.009	0.088	± 0.015	0.084	± 0.021
102	5 ℃	PWP	0.040	± 0.009	0.036	± 0.016	-0.008	± 0.016	0.001	± 0.003	0.007	± 0.003	0.011	± 0.006
		0.4FC	0.037	± 0.006	0.029	± 0.008	-0.004	± 0.008	0.001	± 0.003	0.007	± 0.003	0.006	± 0.005
		FC	0.106	± 0.014	0.095	± 0.025	-0.033	± 0.025	-0.014	± 0.008	0.021	± 0.007	0.034	± 0.016
		Mean	0.061	± 0.008	0.053	± 0.011	-0.015	± 0.011	-0.004	± 0.003	0.012	± 0.003	0.017	± 0.006
	25 ℃	PWP	0.179	± 0.048	0.214	± 0.079	-0.002	± 0.079	0.000	± 0.001	0.065	± 0.033	0.069	± 0.038
		0.4FC	0.158	± 0.033	0.197	± 0.032	0.001	± 0.032	0.004	± 0.001	0.035	± 0.010	0.035	± 0.008
		FC	0.503	± 0.055	0.568	± 0.104	-0.015	± 0.104	-0.002	± 0.003	0.028	± 0.004	0.132	± 0.052
		Mean	0.280	± 0.038	0.326	± 0.053	-0.005	± 0.053	0.001	± 0.001	0.043	± 0.012	0.079	± 0.022
	Mean		0.171	± 0.024	0.190	± 0.032	-0.010	± 0.032	-0.002	± 0.002	0.027	± 0.006	0.048	± 0.012

Table S6: Microbial biomass carbon (MBC), biomass nitrogen (MBN) and available N (mean ± SE) within incubated soils on selected days of measurement (1, 13 and 102) coinciding with measurements of various extracellular enzyme activities.

			MBC (mg kg^{-1})				MBN (mg kg^{-1})				Available N (mg kg^{-1})			
Day	Temperature	Moisture	AMP		Non-AMP		AMP		Non-AMP		AMP		Non-AMP	
1	5 ℃	PWP	26.65	± 4.34	25.15	± 6.47	2.44	± 0.70	2.81	± 1.15	56.39	± 22.44	58.39	± 16.57
		0.4FC	24.96	± 5.14	32.09	± 7.11	2.01	± 0.64	5.26	± 2.84	43.26	± 10.38	69.07	± 17.52
		FC	24.55	± 3.33	24.73	± 6.32	3.93	± 0.78	4.35	± 1.42	100.81	± 25.25	110.26	± 22.17
		Mean	25.39	± 2.43	27.33	± 3.76	2.80	± 0.42	4.14	± 1.10	66.82	± 12.21	79.24	± 11.29
	25 ℃	PWP	18.19	± 4.66	32.16	± 6.24	2.82	± 0.77	3.01	± 0.73	27.45	± 3.84	26.57	± 3.93
		0.4FC	18.89	± 3.37	29.77	± 4.43	2.10	± 0.64	2.90	± 0.63	27.42	± 3.72	31.83	± 4.51
		FC	24.39	± 4.96	33.56	± 7.55	5.08	± 0.93	5.91	± 1.40	59.83	± 12.93	61.79	± 11.18
		Mean	20.49	± 2.50	31.83	± 3.48	3.33	± 0.49	3.94	± 0.60	38.24	± 5.26	40.07	± 4.93
	Mean		22.94	± 1.76	29.58	± 2.56	3.06	± 0.32	4.04	± 0.62	52.53	± 6.83	59.65	± 6.57
13	5 ℃	PWP	32.62	± 6.29	26.34	± 5.97	3.21	± 0.74	2.34	± 0.76	35.07	± 10.47	28.53	± 5.40
		0.4FC	35.54	± 5.53	26.33	± 5.95	3.25	± 0.66	3.36	± 1.07	32.60	± 7.84	38.18	± 8.55
		FC	39.93	± 7.27	28.28	± 6.59	6.08	± 1.07	4.55	± 1.30	62.06	± 15.87	64.02	± 11.10
		Mean	36.03	± 3.62	26.98	± 3.46	4.18	± 0.53	3.42	± 0.62	43.24	± 7.04	43.58	± 5.52
	25 ℃	PWP	32.92	± 5.67	18.00	± 3.63	3.65	± 0.64	2.32	± 0.71	59.21	± 16.38	37.05	± 6.06
		0.4FC	27.33	± 5.00	20.39	± 4.36	2.37	± 0.58	1.32	± 0.49	63.27	± 17.51	41.27	± 8.00
		FC	29.90	± 4.33	22.80	± 5.14	4.94	± 1.09	2.92	± 0.98	128.32	± 28.69	98.24	± 17.47
		Mean	30.05	± 2.84	20.40	± 2.49	3.65	± 0.49	2.18	± 0.44	83.60	± 13.30	58.85	± 8.16
	Mean		33.04	± 2.31	23.69	± 2.15	3.92	± 0.36	2.80	± 0.38	63.42	± 7.88	51.22	± 4.98
102	5 ℃	PWP	22.01	± 2.79	23.36	± 3.53	3.51	± 0.86	2.28	± 0.50	40.47	± 12.06	44.81	± 8.59
		0.4FC	21.19	± 4.59	33.25	± 10.55	2.02	± 0.56	6.20	± 3.57	44.85	± 12.99	48.13	± 7.31
		FC	32.47	± 7.57	24.09	± 4.30	4.59	± 1.06	4.24	± 1.08	89.91	± 25.92	118.19	± 25.85
		Mean	25.23	± 3.13	26.90	± 3.93	3.37	± 0.51	4.24	± 1.25	58.41	± 10.88	70.37	± 10.89
	25 ℃	PWP	29.27	± 5.11	24.77	± 5.17	3.17	± 0.73	2.96	± 0.75	31.47	± 5.02	22.99	± 2.79
		0.4FC	28.37	± 5.09	22.17	± 4.76	3.49	± 0.87	2.44	± 0.56	32.27	± 5.92	26.57	± 2.37
		FC	35.10	± 8.70	26.92	± 5.81	5.46	± 1.24	4.17	± 1.11	59.02	± 10.17	44.31	± 5.34
		Mean	30.91	± 3.68	24.62	± 2.96	4.04	± 0.57	3.19	± 0.49	40.92	± 4.71	31.29	± 2.66
	Mean		28.07	± 2.42	25.76	± 2.45	3.71	± 0.38	3.71	± 0.67	49.67	± 5.98	50.83	± 6.07

Table S7: Extra-cellular enzyme activities (mean ± SE μmol g^{-1} h^{-1}) observed within incubated soils on select days of a 102-day incubation.

			Cellobiosidase				Xylosidase				β-glucosidase				N-acetylglucosaminidase			
Day	Temperature	Moisture	AMP		Non-AMP		AMP		Non-AMP		AMP		Non-AMP		AMP		Non-AMP	
1	5 ℃	PWP	0.09	± 0.02	0.06	± 0.01	0.04	± 0.01	0.03	± 0.01	0.21	± 0.03	0.14	± 0.02	0.08	± 0.02	0.03	± 0.01
		0.4FC	0.08	± 0.02	0.05	± 0.01	0.03	± 0.01	0.03	± 0.00	0.19	± 0.03	0.13	± 0.02	0.07	± 0.02	0.03	± 0.01
		FC	0.12	± 0.02	0.06	± 0.01	0.05	± 0.01	0.04	± 0.01	0.27	± 0.03	0.19	± 0.02	0.08	± 0.02	0.04	± 0.01
		Mean	0.10	± 0.01	0.06	± 0.01	0.04	± 0.01	0.03	± 0.00	0.22	± 0.02	0.15	± 0.01	0.07	± 0.01	0.03	± 0.00
	25 ℃	PWP	0.06	± 0.01	0.08	± 0.02	0.03	± 0.01	0.03	± 0.01	0.15	± 0.03	0.22	± 0.04	0.04	± 0.01	0.06	± 0.01
		0.4FC	0.07	± 0.01	0.08	± 0.01	0.03	± 0.01	0.03	± 0.01	0.15	± 0.03	0.19	± 0.03	0.04	± 0.01	0.08	± 0.02
		FC	0.08	± 0.02	0.12	± 0.03	0.04	± 0.01	0.04	± 0.01	0.19	± 0.03	0.30	± 0.06	0.04	± 0.01	0.09	± 0.02
		Mean	0.07	± 0.01	0.09	± 0.01	0.03	± 0.00	0.04	± 0.00	0.16	± 0.02	0.24	± 0.03	0.04	± 0.00	0.08	± 0.01
	Mean		0.08	± 0.01	0.07	± 0.01	0.04	± 0.00	0.03	± 0.00	0.19	± 0.01	0.19	± 0.01	0.06	± 0.01	0.06	± 0.01
13	5 ℃	PWP	0.09	± 0.03	0.05	± 0.01	0.04	± 0.01	0.03	± 0.00	0.21	± 0.04	0.16	± 0.02	0.07	± 0.02	0.03	± 0.01
		0.4FC	0.09	± 0.01	0.05	± 0.01	0.04	± 0.01	0.03	± 0.00	0.20	± 0.03	0.15	± 0.02	0.07	± 0.01	0.03	± 0.01
		FC	0.14	± 0.02	0.07	± 0.01	0.05	± 0.01	0.04	± 0.01	0.29	± 0.03	0.20	± 0.02	0.08	± 0.01	0.04	± 0.01
		Mean	0.11	± 0.01	0.06	± 0.00	0.04	± 0.00	0.04	± 0.00	0.23	± 0.02	0.17	± 0.01	0.07	± 0.01	0.04	± 0.00
	25 ℃	PWP	0.08	± 0.02	0.05	± 0.01	0.03	± 0.00	0.03	± 0.01	0.22	± 0.04	0.16	± 0.02	0.08	± 0.02	0.05	± 0.02
		0.4FC	0.08	± 0.01	0.06	± 0.01	0.03	± 0.00	0.03	± 0.01	0.19	± 0.02	0.17	± 0.03	0.08	± 0.02	0.05	± 0.01
		FC	0.09	± 0.01	0.08	± 0.01	0.04	± 0.01	0.04	± 0.01	0.26	± 0.03	0.22	± 0.03	0.09	± 0.02	0.05	± 0.01
		Mean	0.08	± 0.01	0.06	± 0.01	0.03	± 0.00	0.03	± 0.00	0.22	± 0.02	0.18	± 0.02	0.08	± 0.01	0.05	± 0.01
	Mean		0.10	± 0.01	0.06	± 0.00	0.04	± 0.00	0.03	± 0.00	0.23	± 0.01	0.18	± 0.01	0.08	± 0.01	0.04	± 0.00
102	℃	PWP	0.05	± 0.01	0.07	± 0.02	0.02	± 0.00	0.03	± 0.00	0.16	± 0.02	0.19	± 0.04	0.04	± 0.01	0.06	± 0.01
		0.4FC	0.06	± 0.01	0.08	± 0.01	0.03	± 0.01	0.03	± 0.01	0.15	± 0.03	0.19	± 0.03	0.04	± 0.01	0.06	± 0.01
		FC	0.07	± 0.02	0.10	± 0.02	0.04	± 0.01	0.03	± 0.01	0.19	± 0.03	0.22	± 0.03	0.05	± 0.01	0.06	± 0.01
		Mean	0.06	± 0.01	0.08	± 0.01	0.03	± 0.00	0.03	± 0.00	0.17	± 0.02	0.20	± 0.02	0.04	± 0.00	0.06	± 0.01
	25 ℃	PWP	0.08	± 0.02	0.06	± 0.01	0.04	± 0.01	0.03	± 0.00	0.23	± 0.03	0.16	± 0.02	0.07	± 0.01	0.05	± 0.01
		0.4FC	0.10	± 0.02	0.06	± 0.01	0.03	± 0.01	0.03	± 0.00	0.22	± 0.03	0.18	± 0.02	0.07	± 0.01	0.05	± 0.01
		FC	0.11	± 0.02	0.08	± 0.01	0.04	± 0.01	0.04	± 0.01	0.26	± 0.03	0.23	± 0.03	0.08	± 0.01	0.05	± 0.01
		Mean	0.10	± 0.01	0.07	± 0.01	0.04	± 0.00	0.04	± 0.00	0.23	± 0.02	0.19	± 0.02	0.07	± 0.01	0.05	± 0.01
	Mean		0.08	± 0.01	0.07	± 0.01	0.03	± 0.00	0.03	± 0.00	0.20	± 0.01	0.19	± 0.01	0.06	± 0.00	0.05	± 0.00