

Table S2. Effect of RFI phenotype and diet on physiological and rumen fermentation variables of beef heifers*

	HF diet								LF diet							
	HRFI	SD	95% Confidence interval		LRFI	SD	95% Confidence interval		HRFI	SD	95% Confidence interval		LRFI	SD	95% Confidence interval	
			upper	lower			upper	lower			upper	lower			upper	lower
DMI ¹ kg/d	5.7	1.28	4.91	6.46	5.4	0.84	4.88	5.85	10.4	1.48	9.54	11.33	9.6	1.17	8.95	10.3
RFI kg/d	0.7	0.39	0.45	0.92	-0.7	0.24	-0.88	-0.60	0.7	0.36	0.44	0.92	-0.7	0.24	-0.88	-0.60
ADG kg/d	0.1	0.12	-0.06	0.09	0.1	0.33	-0.12	0.26	0.6	0.09	0.52	0.63	0.6	0.11	0.57	0.70
CH ₄ ² g/d	130.5	30.85	111.85	149.13	142.2	19.66	130.83	153.53	189.8	31.75	170.57	208.94	203.9	32.57	185.10	222.71
MLW ³ kg	80.0	6.12	76.31	83.71	80.7	7.17	76.57	84.85	92.7	6.46	88.76	96.57	93.8	5.69	90.48	97.05
Total VFA ⁴ mmol	120.0	15.03	110.92	129.09	112.9	22.70	99.8	126.01	151.6	34.61	130.66	172.49	149.8	24.12	135.87	163.72
Acetate mmol/mol	653.8	20.17	641.63	666.01	671.0	17.71	660.73	681.19	658.1	27.85	641.28	674.94	656.8	33.17	637.63	675.93
Propionate mmol/mol	228.8	13.92	220.42	237.24	207.0	12.54	199.75	214.24	200.7	31.33	181.76	219.62	202.7	34.19	182.96	222.44
Isobutyrate mmol/mol	7.9	1.15	7.16	8.55	7.9	1.50	7.07	8.79	4.6	1.03	3.94	5.18	4.9	1.11	4.30	5.58
Butyrate mmol/mol	83.2	4.49	80.53	85.96	87.2	7.26	82.97	91.35	117.2	15.94	107.59	126.85	111.1	14.68	102.65	119.60
Isovalerate mmol/mol	10.7	2.43	9.23	12.16	12.5	3.87	10.27	14.73	6.9	1.18	6.16	7.58	9.3	3.47	7.28	11.29
Valerate mmol/mol	15.6	1.87	14.42	16.69	14.5	2.30	13.13	15.78	12.6	3.22	10.61	14.50	15.2	9.26	9.83	20.52
A:P ⁵ mmol/mol	2.9	0.25	2.72	3.02	3.3	0.27	3.10	3.41	3.4	0.54	3.03	3.68	3.3	0.67	2.96	3.73
pH	7.1	0.32	6.92	7.30	7.2	0.31	6.97	7.33	6.3	0.31	6.13	6.51	6.4	0.21	6.29	6.54
CH ₄ % GEI ⁶	6.0	0.32	5.08	6.98	7.0	1.54	6.06	7.84	5.2	1.10	4.54	5.87	6.0	0.90	5.47	6.51
DMD ⁷ g/kg DM	635.0	27.40	618.48	651.57	663.3	42.3	638.89	687.75	713.0	25.62	696.76	729.31	721.3	27.62	705.37	797.27
OMD ⁸ g/kg DM	643.5	30.80	624.85	662.08	676.5	40.89	652.89	700.11	733.3	25.61	717.01	749.55	742.0	27.92	725.89	758.14
CPD ⁹ g/kg DM	436.8	45.56	409.24	464.30	483.4	74.08	440.66	526.20	648.2	28.01	630.42	666.02	655.1	23.32	641.68	668.61
NDFD ¹⁰ g/kg DM	668.0	86.75	615.61	720.45	673.9	39.35	651.14	696.59	558.7	47.52	528.5	588.9	584.3	53.47	553.39	615.13
ADFD ¹¹ g/kg DM	669.2	88.33	615.86	722.61	675.9	37.90	654.01	697.77	427.5	60.6	388.96	466.01	446.4	73.55	403.88	488.81
GED ¹² KJ/MJ	638.5	32.75	616.48	660.49	667.0	42.44	641.39	692.6	709.0	27.87	689.03	728.91	719.5	26.89	703.97	735.03

*n= 28, 14 H-RFI and 14 L-RFI animals

HF = high forage, LF = low forage

H = high, L= low

RFI = residual feed intake

¹Dry matter intake, ²Methane, ³Mean live weight, ⁴Total volatile fatty acids, ⁵Acetate:propionate ratio, ⁶Methane energy from gross energy intake, ⁷Dry matter digestibility, ⁸Organic matter digestibility, ⁹Crude protein digestibility, ¹⁰Neutral detergent fiber digestibility, ¹¹Acid detergent fiber digestibility, ¹²Gross energy digestibility