

1 **Table S1. Means and variability of methane emissions and archaea:bacteria ratios for Aberdeen Angus- or Limousin-sired cattle offered**  
 2 **either forage- or concentrate-based diets.**

Trait	Breed type	Forage based diet				Concentrate based diet			
		No	Mean	CV (%)	Range	No	Mean	CV (%)	Range
Methane, g/day	Aberdeen Angus sired	17	218.2	17.6	172 - 333	18	149.6	25.1	78 - 233
	Limousin sired	17	192.4	14.4	152 - 266	16	136.1	31.5	86 - 216
Methane, g/kg DMI	Aberdeen Angus sired	17	21.38	19.4	15.90 - 31.41	18	13.42	23.8	7.63 - 18.14
	Limousin sired	17	22.03	17.7	14.43 - 30.37	16	13.93	28.8	9.29 - 22.78
Archaea:Bacteria ratio in live animals	Aberdeen Angus sired	13	7.73	50.1	3.05 – 17.11	14	3.33	64.5	0.70 - 8.47
	Limousin sired	12	5.87	39.0	2.13 – 9.38	11	2.64	65.1	0.96 - 6.73
Archaea:Bacteria ratio in slaughtered animals	Aberdeen Angus sired	17	6.37	35.4	1.47 – 10.95	17	2.75	50.2	0.85 - 5.77
	Limousin sired	17	6.87	42.6	2.23 – 14.0	16	2.97	39.3	1.38 - 4.91

3 DMI = dry matter intake; CV = Coefficient of variation.