

**Supplementary material:**

Table S1: Amino acids analysis of pellet and forage (Period 1).

		Pellet		Forage	
		Control	Trial	Wheat silage	Pasture
DM%		86.9	87.3	61.6	92.3
Crude protein % (DM basis)		16.8	15.1	11.9	22.3
% (DM basis)	Threonine	0.41	0.39	0.51	0.91
	Serine	0.58	0.56	0.49	0.83
	Glutamic acid	3.30	3.21	1.12	2.23
	Glycine	0.56	0.56	0.59	1.09
	Alanine	0.47	0.46	0.87	1.29
	Aspartic acid	0.72	0.70	1.19	1.80
	Valine	0.59	0.56	0.81	1.16
	Methionine	0.16	0.30	0.08	0.18
	Lysine	0.44	0.48	0.52	1.08
	Isoleucine	0.45	0.44	0.63	0.92
	Leucine	0.86	0.82	0.99	1.68
	Arginine	0.61	0.61	0.43	1.01
	Proline	1.19	1.12	1.77	0.94
% of crude protein (DM basis)	Threonine	2.47	2.58	4.26	4.09
	Serine	3.42	3.72	4.13	3.74
	Glutamic acid	19.7	21.2	9.39	9.99
	Glycine	3.36	3.72	4.98	4.87
	Alanine	2.81	3.03	7.28	5.77
	Aspartic acid	4.32	4.63	10.04	8.06
	Valine	3.49	3.72	6.83	5.18
	Methionine	0.96	1.97	0.68	0.80
	Lysine	2.60	3.19	4.37	4.86
	Isoleucine	2.67	2.88	5.27	4.13
	Leucine	5.14	5.46	8.29	7.55
	Arginine	3.63	4.02	3.60	4.51
	Proline	7.06	7.43	14.9	4.24

Table S2: Amino acids analysis of pellet and forage (Period 2).

		Pellet		Forage
		Control	Trial	Pasture
DM%		89.0	89.3	89.3
Crude protein% (DM basis)		17.4	15.4	20.9
% (DM basis)	Threonine	0.43	0.38	0.87
	Serine	0.60	0.55	0.82
	Glutamic acid	3.54	3.27	2.01
	Glycine	0.58	0.55	1.02
	Alanine	0.48	0.47	1.22
	Aspartic acid	0.76	0.72	1.71
	Valine	0.60	0.56	1.10
	Methionine	0.18	0.28	0.12
	Lysine	0.43	0.48	1.05
	Isoleucine	0.48	0.44	0.87
	Leucine	0.90	0.83	1.60
	Tyrosine	0.25	0.22	0.40
	Phenylalanine	0.60	0.56	1.04
	Histidine	0.31	0.29	0.38
	Arginine	0.64	0.59	0.94
Proline	1.21	1.15	1.09	
% of crude protein (DM basis)	Threonine	2.45	2.47	4.19
	Serine	3.42	3.56	3.92
	Glutamic acid	20.34	21.23	9.63
	Glycine	3.36	3.56	4.91
	Alanine	2.78	3.05	5.85
	Aspartic acid	4.39	4.65	8.21
	Valine	3.42	3.64	5.26
	Methionine	1.03	1.82	0.59
	Lysine	2.45	3.13	5.04
	Isoleucine	2.78	2.84	4.16
	Leucine	5.17	5.38	7.67
	Arginine	3.68	3.85	4.48
	Proline	6.97	7.49	5.24