

Supplementary Material

Table S1. Macro mineral and trace element concentrations in dietary ingredients and drinking water.

Element	Corn silage	Alfalfa hay	Meadow hay	Corn	Barley	Soybean meal	Mineral/vitamin supplement	Probiotic supplement	Calcium carbonate	Sodium chloride	Sodium bicarbonate	Water ^a
g/kg DM												
Ca	2.04	14.5	9.38	0.76	0.87	4.17	92.4	5.04	401.0	0.13	--	84.2
P	1.59	1.24	1.61	4.00	3.20	8.15	2.10	3.62	--	--	--	0.02
K	8.30	28.1	25.0	5.08	6.02	26.5	4.46	4.39	--	0.10	0.20	4.77
Na	0.14	0.28	0.43	0.07	2.21	0.07	8.44	3.43	--	380.0	258.0	58.7
Mg	1.06	2.53	1.66	1.42	1.31	3.70	12.5	3.43	3.01	3.80	--	26.5
S	0.79	2.82	0.92	1.14	1.15	4.50	4.49	32.2	--	--	--	28.2
mg/kg DM												
Zn	21.2	22.6	20.9	49.7	72.2	61.9	47447	1231	--	--	--	43.4
Fe	51.8	139.2	64.8	152.9	87.1	222.0	22086	670	33.6	0.99	4.38	1.61
Cu	4.82	9.47	7.16	4.93	8.47	23.3	4734	77.2	1.11	0.61	0.10	2.72
Mn	22.4	25.3	18.4	16.4	35.2	36.5	22033	924	19.2	23.8	--	0.26
Se	0.05	0.11	0.12	0.10	0.15	0.34	115.8	3.00	--	--	--	0.88
Mo	0.47	1.85	12.7	1.14	2.07	14.0	1.25	0.84	--	--	--	0.81
Co	0.02	0.09	0.14	0.06	0.13	0.19	97.6	4.21	0.06	0.08	0.01	0.09
Li	0.07	1.12	0.65	0.19	0.08	0.09	5.93	4.27	0.07	0.15	3.59	23.2
B	4.58	37.2	24.2	2.45	2.32	51.1	17.0	2.39	0.28	0.40	25.0	161.4
Ti	0.81	2.85	1.23	2.24	1.15	3.17	25.4	5.93	0.42	--	--	0.23
Rb	2.58	30.6	5.51	2.33	2.82	17.7	4.90	4.73	0.01	0.02	0.09	0.82
Sr	7.84	37.6	85.5	2.58	3.10	8.35	50.5	6.23	144.7	10.1	--	753.0

^a Concentrations in drinking water are expressed as mg/L for macro minerals and µg/L for trace elements. DM = dry matter