

**Supplementary Table S1. Phytochemical profile of feeds (mg per 100 g).**

	<b>GRAIN<sup>1</sup></b>	<b>GRAPE<sup>2</sup></b>	<b>p-Value</b>
<b>Isocitric acid lactone</b>	6.44 ± 1.09	6.80 ± 1.48	0.850
<b>Sucrose</b>	32.07 ± 3.19	32.26 ± 5.91	0.978
<b>D-Maltose</b>	38.50 ± 3.90	37.58 ± 6.29	0.906
<b>Citric acid</b>	2.45 ± 0.31	2.01 ± 0.70	0.594
<b>D-Tartaric acid</b>	1.25 ± 0.07	1.17 ± 0.16	0.653
<b>Succinic acid</b>	3.86 ± 0.42	3.74 ± 0.43	0.848
<b>Adipic acid</b>	2.13 ± 0.54	2.30 ± 0.76	0.862
<b>(-)-Epicatechin gallate</b>	26.67 ± 25.00	188.13 ± 124.82	0.288
<b>Epicatechin</b>	2.43 ± 2.35	13.19 ± 7.57	0.254
<b>Naringenin</b>	0.10 ± 0.01	0.11 ± 0.02	0.688
<b>Hesperidin</b>	0.54 ± 0.09	0.43 ± 0.12	0.480
<b>Hesperetin</b>	0.14 ± 0.00	0.14 ± 0.01	0.674
<b>Apigenin</b>	0.23 ± 0.03	0.18 ± 0.06	0.514
<b>Catechol</b>	1.57 ± 0.08	1.57 ± 0.10	0.986
<b>Chrysin</b>	0.04 ± 0.00	0.05 ± 0.00	0.400
<b>Diosmetin</b>	0.60 ± 0.04	0.57 ± 0.02	0.424
<b>Isorhamnetin 3-rutinoside</b>	17.37 ± 3.18	12.49 ± 2.28	0.235
<b>Eriodictyol-7-o-glucoside</b>	0.11 ± 0.03	0.13 ± 0.06	0.832
<b>Isorhamnetin</b>	2.25 ± 0.50	1.71 ± 0.15	0.325
<b>Biochanin A</b>	0.01 ± 0.00	0.00 ± 0.00	0.945
<b>Kaempferol</b>	0.30 ± 0.05	0.51 ± 0.25	0.464
<b>Pyrogallol</b>	0.06 ± 0.01	0.05 ± 0.01	0.727
<b>3,4-Dihydroxybenzoic acid</b>	5.31 ± 0.39	5.43 ± 0.65	0.884
<b>Salicylic acid</b>	3.47 ± 0.13	3.16 ± 0.29	0.371
<b>Vanillic acid</b>	7.22 ± 0.28	6.34 ± 0.31	0.065
<b>2,6-Dihydroxybenzoic acid</b>	10.10 ± 0.97	12.57 ± 1.14	0.139

<b>Quercetin</b>	$4.20 \pm 0.35$	$6.95 \pm 2.54$	0.359
<b>Caffeic acid</b>	$0.20 \pm 0.02$	$0.16 \pm 0.01$	0.162
<b>Ellagic acid</b>	$0.07 \pm 0.07$	$1.92 \pm 1.62$	0.338
<b>Pyrocatechol sulfate</b>	$3.34 \pm 0.22$	$3.35 \pm 0.57$	0.990
<b>Syringic acid</b>	$2.23 \pm 0.10$	$2.18 \pm 0.25$	0.849
<b>Ethyl gallate</b>	$0.01 \pm 0.01$	$0.09 \pm 0.04$	0.265
<b>Chlorogenic acid</b>	$48.52 \pm 7.34$	$35.96 \pm 3.67$	0.150
<b>Coixol</b>	$0.43 \pm 0.11$	$0.28 \pm 0.03$	0.225
<b>3,5-Dihydroxybenzoic acid</b>	$5.21 \pm 0.31$	$5.75 \pm 0.31$	0.248
<b>Vanillin</b>	$5.58 \pm 0.55$	$6.74 \pm 0.47$	0.136
<b>4-Hydroxybenzoic acid</b>	$6.81 \pm 0.63$	$6.67 \pm 0.94$	0.913
<b>Gallocatechin gallate</b>	$1.67 \pm 0.38$	$4.42 \pm 2.11$	0.285
<b>Arbutin</b>	$0.53 \pm 0.04$	$0.50 \pm 0.06$	0.698
<b>p-Coumaric acid</b>	$8.70 \pm 0.30$	$8.01 \pm 0.30$	0.132
<b>Shikimic acid</b>	$1.70 \pm 0.13$	$1.59 \pm 0.36$	0.801
<b>Thiamine</b>	$0.07 \pm 0.00$	$0.07 \pm 0.00$	0.816
<b>Niacin</b>	$0.06 \pm 0.01$	$0.01 \pm 0.00$	< 0.010
<b>Nicotinic acid</b>	$0.11 \pm 0.00$	$0.14 \pm 0.03$	0.428
<b>Pyridoxine</b>	$0.01 \pm 0.00$	$0.01 \pm 0.00$	0.490
<b>Riboflavin</b>	$1.41 \pm 0.15$	$0.99 \pm 0.13$	0.062
<b>Alpha-tocopherol</b>	$1.29 \pm 0.14$	$1.19 \pm 0.26$	0.756
<b>Pantothenic acid</b>	$0.16 \pm 0.01$	$0.14 \pm 0.00$	0.096
<b>Stachydrine</b>	$1.03 \pm 0.10$	$1.05 \pm 0.10$	0.848
<b>Trigonelline</b>	$0.11 \pm 0.01$	$0.11 \pm 0.01$	0.686
<b>Tyramine</b>	$0.00 \pm 0.00$	$0.06 \pm 0.06$	0.420
<b>Betaine</b>	$0.58 \pm 0.03$	$0.44 \pm 0.04$	< 0.050
<b>Tricine</b>	$0.31 \pm 0.06$	$0.27 \pm 0.09$	0.701
<b>Tamarixetin</b>	$1.74 \pm 0.28$	$1.27 \pm 0.20$	0.203

<b>Sophoricoside</b>	$6.54 \pm 1.86$	$6.57 \pm 3.10$	0.995
<b>Quercetin-3-O-lactoside</b>	$2.74 \pm 0.27$	$5.03 \pm 1.96$	0.327
<b>Scopoletin</b>	$0.02 \pm 0.00$	$0.02 \pm 0.00$	0.835
<b>Calycosin</b>	$0.07 \pm 0.03$	$0.07 \pm 0.05$	0.981
<b>Glycitein</b>	$0.35 \pm 0.11$	$0.29 \pm 0.13$	0.762
<b>Naringenin-7-O-glucoside</b>	$37.38 \pm 7.68$	$31.60 \pm 2.46$	0.488
<b>Xanthohumol</b>	$0.06 \pm 0.02$	$0.03 \pm 0.00$	0.195
<b>Schaftoside</b>	$2.89 \pm 0.32$	$2.10 \pm 0.46$	0.209
<b>Chrysoeriol</b>	$2.56 \pm 0.22$	$2.33 \pm 0.12$	0.363
<b>Isovitexin/Nitixin</b>	$6.60 \pm 0.52$	$5.53 \pm 1.15$	0.438
<b>Jasmonic acid</b>	$0.70 \pm 0.09$	$0.51 \pm 0.14$	0.299
<b>Morin</b>	$0.91 \pm 0.04$	$0.89 \pm 0.10$	0.836

Values reported as means  $\pm$  standard error. Results of two-sample t-test. Statistical significance at  $p < 0.05$ . <sup>1</sup>GRAIN: total mixed ration (TMR) ( $n = 11$ ); <sup>2</sup>GRAPE: TMR + 5% DM grapeseed extracts ( $n = 4$ ). N.B.: no GRASS (diverse pasture) samples were left for the phytochemical analysis.