

Table S1. Milk fatty acid concentration (g/100 g of milk fat) of low starch (LS) and high starch (HS) diets.

Variable	Treatment		SEM ¹	P-Value
	LS	HS		
Individual FA				
C4:0	2.48	2.30	0.02	<0.01
C5:0	0.04	0.05	<0.01	0.19
C6:0	1.87	1.83	0.02	0.10
C7:0	0.04	0.05	<0.01	<0.01
C8:0	1.23	1.27	0.01	<0.01
C9:0	0.06	0.07	<0.01	<0.01
C10:0	3.21	3.54	0.03	<0.01
C10:1	0.31	0.33	<0.01	0.20
C11:0	0.10	0.14	0.01	<0.01
C12:0	3.85	4.48	0.06	<0.01
C12:1	0.11	0.13	<0.01	<0.01
<i>Iso</i> C13:0	0.02	0.02	<0.01	0.15
<i>Anteiso</i> C13:0	0.10	0.11	<0.01	<0.01
C14:0	11.2	11.9	0.16	<0.01
<i>Iso</i> C14:0	0.18	0.17	0.02	0.57
C14:1 <i>cis</i> -9	1.03	1.09	0.03	0.16
C15:0	1.21	1.35	0.04	0.02
<i>Iso</i> C15:0	0.21	0.20	<0.01	0.50
<i>Anteiso</i> C15:0	0.42	0.39	<0.01	<0.01
C16:0	35.0	32.6	0.32	<0.01
<i>Iso</i> C16:0	0.17	0.15	<0.01	0.03
C16:1 <i>trans</i> -9	0.23	0.24	<0.01	0.73
C16:1 <i>cis</i> -9	1.52	1.43	0.03	0.04
C18:0	6.63	6.43	0.12	0.25
C18:1 <i>trans</i> -4	0.10	0.10	<0.01	0.98
C18:1 <i>trans</i> -5	0.01	0.01	<0.01	0.61
C18:1 <i>trans</i> -6, <i>trans</i> -8	0.09	0.10	<0.01	<0.01
C18:1 <i>trans</i> -9	0.04	0.04	<0.01	0.19
C18:1 <i>trans</i> -10	0.07	0.10	0.01	0.11
C18:1 <i>trans</i> -11	0.32	0.31	0.02	0.60
C18:1 <i>trans</i> -12	0.18	0.19	<0.01	0.10
C18:1 <i>cis</i> -9	12.0	11.9	0.18	0.89
C18:1 <i>trans</i> -15/ <i>cis</i> -10	0.05	0.05	<0.01	0.59
C18:1 <i>cis</i> -11	0.22	0.27	0.01	0.03
C18:1 <i>cis</i> -12	0.22	0.26	0.01	<0.01
C18:1 <i>cis</i> -13	0.04	0.04	<0.01	0.20
C18:1 <i>cis</i> -14	0.25	0.26	<0.01	0.47
C18:2 <i>cis</i> -9, <i>cis</i> -12	1.41	1.75	0.02	<0.01
C18:2 <i>cis</i> -9, <i>trans</i> -11 (CLA)	0.29	0.30	<0.01	0.25
C18:3 <i>cis</i> -9, <i>cis</i> -12, <i>cis</i> -15	0.27	0.29	0.01	0.18
C19:0	0.16	0.13	0.02	0.16
C20:0	0.12	0.11	<0.01	<0.01
C20:1 <i>cis</i> -11	0.09	0.09	<0.01	<0.01
C20:5 <i>cis</i> -5, <i>cis</i> -8, <i>cis</i> -11, <i>cis</i> -14, <i>cis</i> -17 (EPA)	0.03	0.03	<0.01	<0.01

C21:0	0.01	0.01	<0.01	0.04
C22:0	0.05	0.04	<0.01	0.05
C22:5 <i>cis</i> -7, <i>cis</i> -10, <i>cis</i> -13, <i>cis</i> -16, <i>cis</i> -19 (DPA)	0.05	0.06	<0.01	0.08
C24:0	0.03	0.04	<0.01	0.01

¹Pooled standard error of the mean.

Table S2. Milk fatty acid yield (g/d) of low starch (LS) and high starch (HS) diets.

Variable	Treatment		SEM ¹	P-Value
	LS	HS		
Individual FA				
C4:0	42.0	39.1	1.04	0.06
C5:0	0.73	0.78	0.03	0.26
C6:0	31.8	31.1	0.71	0.50
C7:0	0.72	0.92	0.06	<0.01
C8:0	19.9	20.9	0.45	0.11
C9:0	0.94	1.28	0.06	<0.01
C10:0	51.7	58.1	1.22	<0.01
C10:1	5.24	5.61	0.16	0.11
C11:0	1.68	2.46	0.14	<0.01
C12:0	63.5	77.4	1.82	<0.01
C12:1	1.85	2.30	0.08	<0.01
<i>Iso</i> C13:0	0.41	0.38	0.02	0.31
<i>Anteiso</i> C13:0	1.60	1.91	0.07	<0.01
C14:0	184	201	4.18	<0.01
<i>Iso</i> C14:0	3.14	2.88	0.27	0.50
C14:1 <i>cis</i> -9	17.3	18.7	0.59	0.12
C15:0	20.7	23.0	0.83	0.06
<i>Iso</i> C15:0	3.44	3.38	0.18	0.75
<i>Anteiso</i> C15:0	7.15	6.63	0.23	0.12
C16:0	596	554	14.3	0.04
<i>Iso</i> C16:0	2.83	2.54	0.11	0.08
C16:1 <i>trans</i> -9	3.92	3.98	0.12	0.73
C16:1 <i>cis</i> -9	26.1	24.3	0.57	0.99
C18:0	107	111	2.72	0.34
C18:1 <i>trans</i> -4	0.16	0.15	0.02	0.76
C18:1 <i>trans</i> -5	0.15	0.14	0.01	0.68
C18:1 <i>trans</i> -6, <i>trans</i> -8	1.63	1.78	0.06	0.08
C18:1 <i>trans</i> -9	0.64	0.67	0.02	0.18
C18:1 <i>trans</i> -10	1.23	1.76	0.23	0.12
C18:1 <i>trans</i> -11	5.37	5.27	0.29	0.80
C18:1 <i>trans</i> -12	3.08	3.28	0.11	0.21
C18:1 <i>cis</i> -9	190	206	4.41	0.02
C18:1 <i>trans</i> -15/ <i>cis</i> -10	0.77	0.82	0.04	0.44
C18:1 <i>cis</i> -11	3.78	4.62	0.30	0.06

C18:1 <i>cis</i> -12	3.63	4.33	0.12	<0.01
C18:1 <i>cis</i> -13	0.66	0.77	0.05	0.09
C18:1 <i>cis</i> -14	4.17	4.34	0.14	0.41
C18:2 <i>cis</i> -9, <i>cis</i> -12	23.6	29.6	0.67	<0.01
C18:2 <i>cis</i> -9, <i>trans</i> -11 (CLA)	4.80	5.14	0.17	0.16
C18:3 <i>cis</i> -9, <i>cis</i> -12, <i>cis</i> -15	4.43	4.87	0.19	0.12
C19:0	2.57	2.24	0.21	0.28
C20:0	2.06	1.94	0.07	0.26
C20:1 <i>cis</i> -11	1.59	1.51	0.05	0.26
C20:5 <i>cis</i> -5, <i>cis</i> -8, <i>cis</i> -11, <i>cis</i> -14, <i>cis</i> -17 (EPA)	0.49	0.43	0.02	0.03
C21:0	0.12	0.16	0.01	0.11
C22:0	0.78	0.70	0.04	0.17
C22:5 <i>cis</i> -7, <i>cis</i> -10, <i>cis</i> -13, <i>cis</i> -16, <i>cis</i> -19 (DPA)	0.87	1.01	0.04	0.02
C24:0	0.59	0.55	0.02	0.12

¹Pooled standard error of the mean.

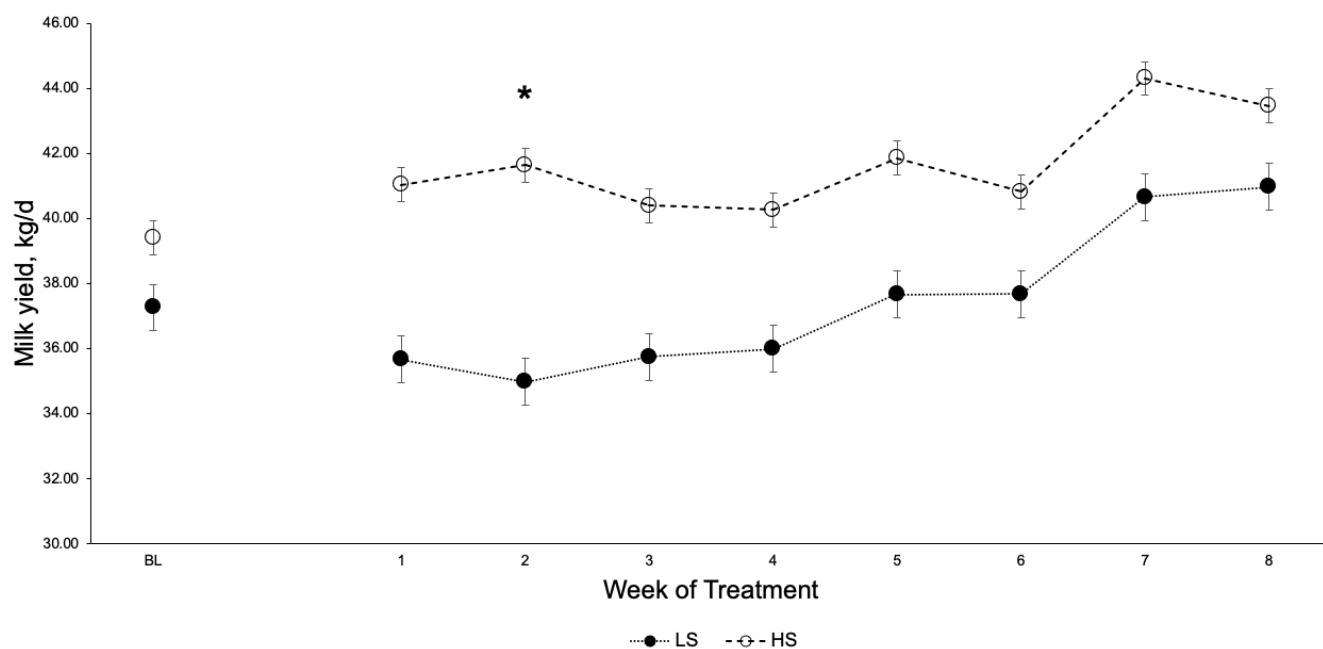


Figure S1. Effects of dietary starch concentration on milk yield. * Indicates a significant interaction ($P \leq 0.05$) between week and treatment.

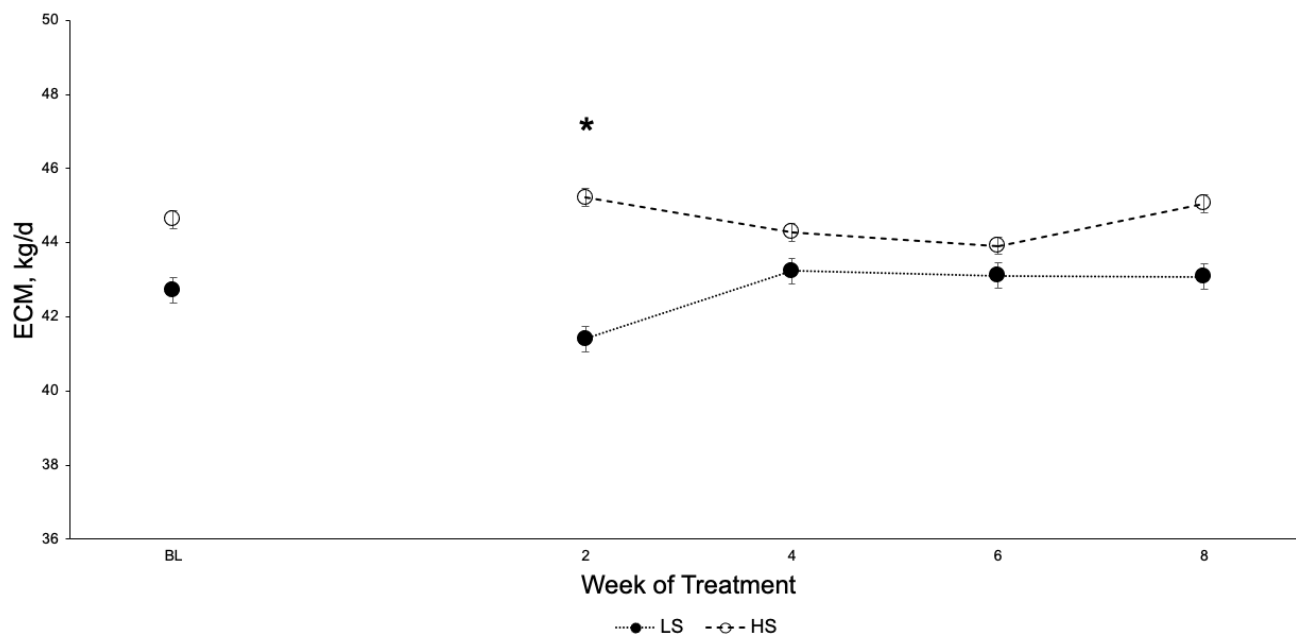


Figure S2. Effects of dietary starch concentration on energy-corrected milk yield. *Treatment \times Week, $P < 0.05$. * Indicates a significant interaction ($P \leq 0.05$) between week and treatment.

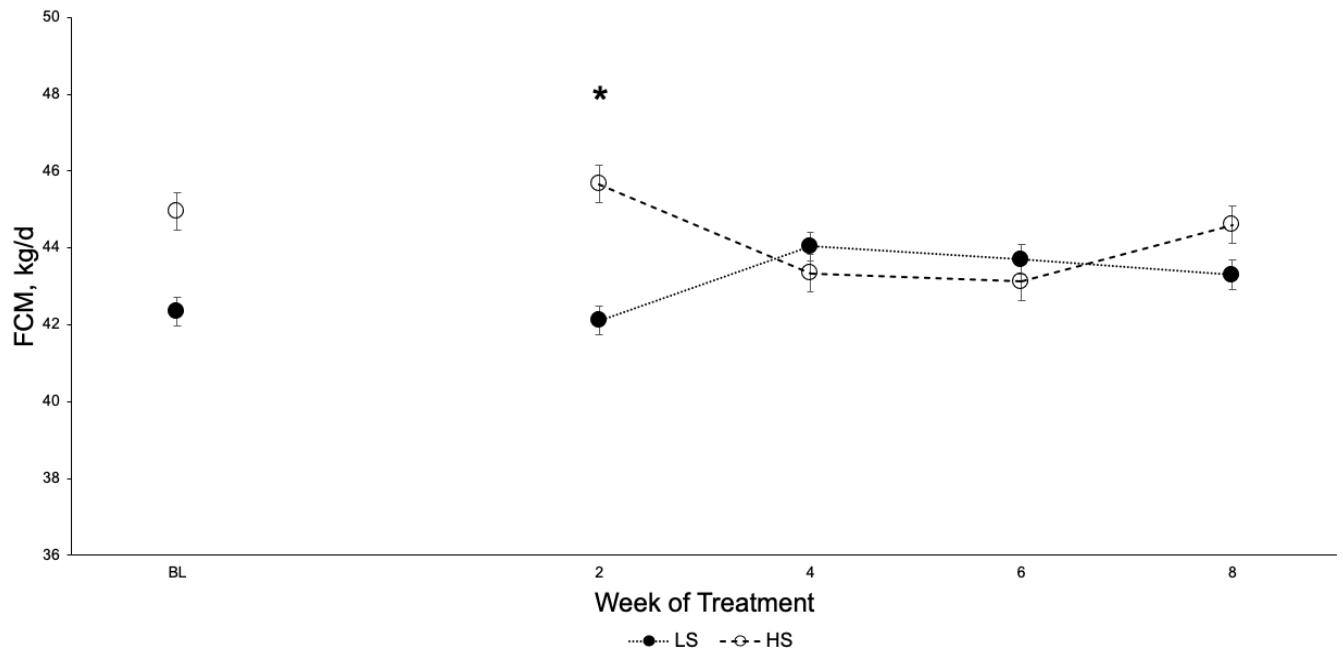


Figure S3. Effects of dietary starch concentration on 3.5% fat-corrected milk yield. * Indicates a significant interaction ($P \leq 0.05$) between week and treatment.

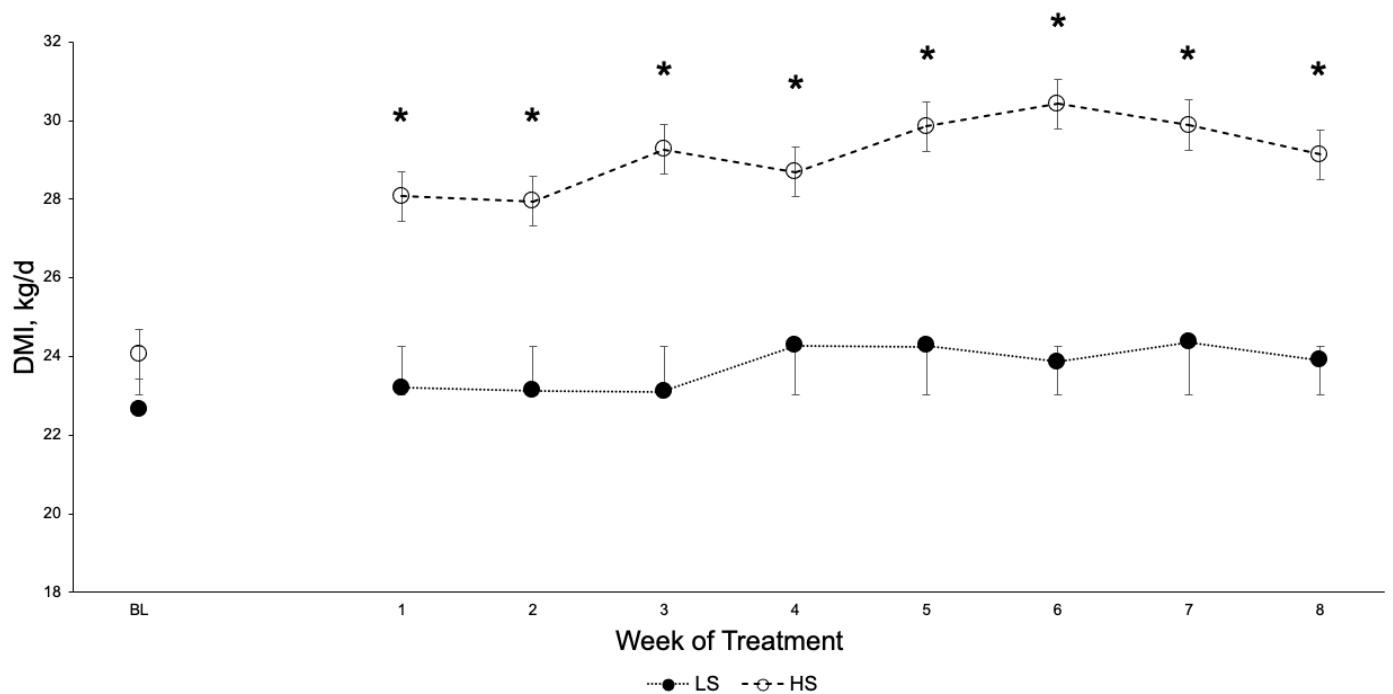


Figure S4. Effects of dietary starch concentration on dry matter intake. * Indicates a significant interaction ($P \leq 0.05$) between week and treatment.

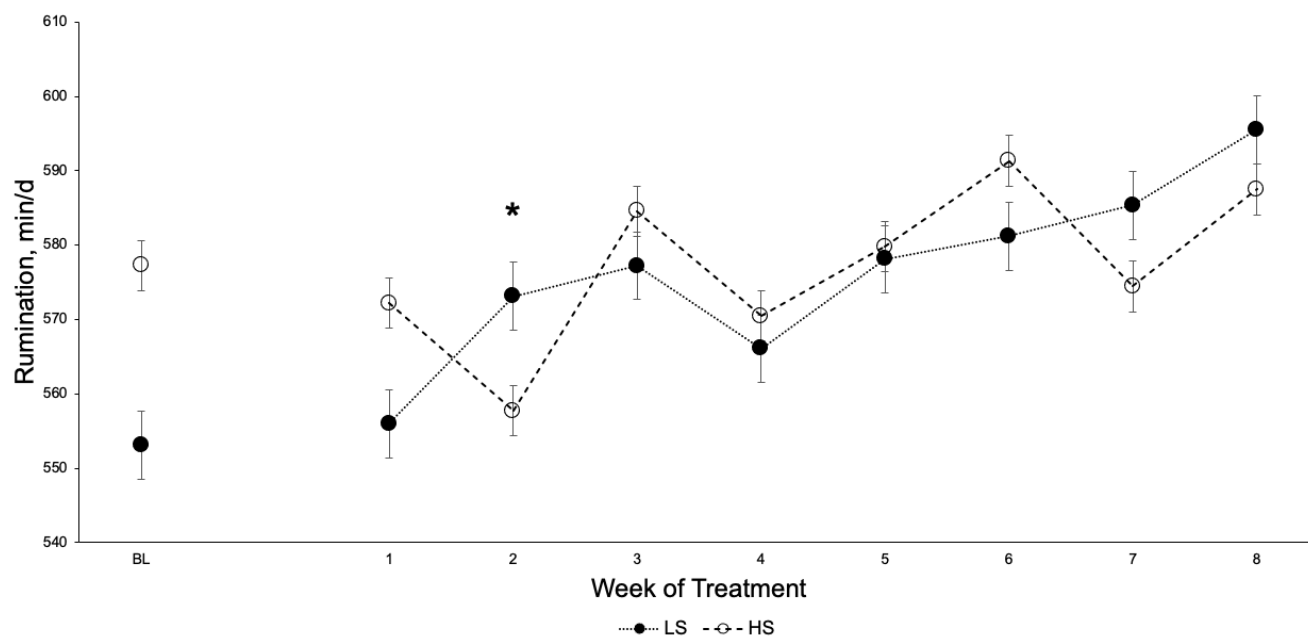


Figure S5. Effects of dietary starch concentration on rumination. * Indicates a significant interaction ($P \leq 0.05$) between week and treatment.

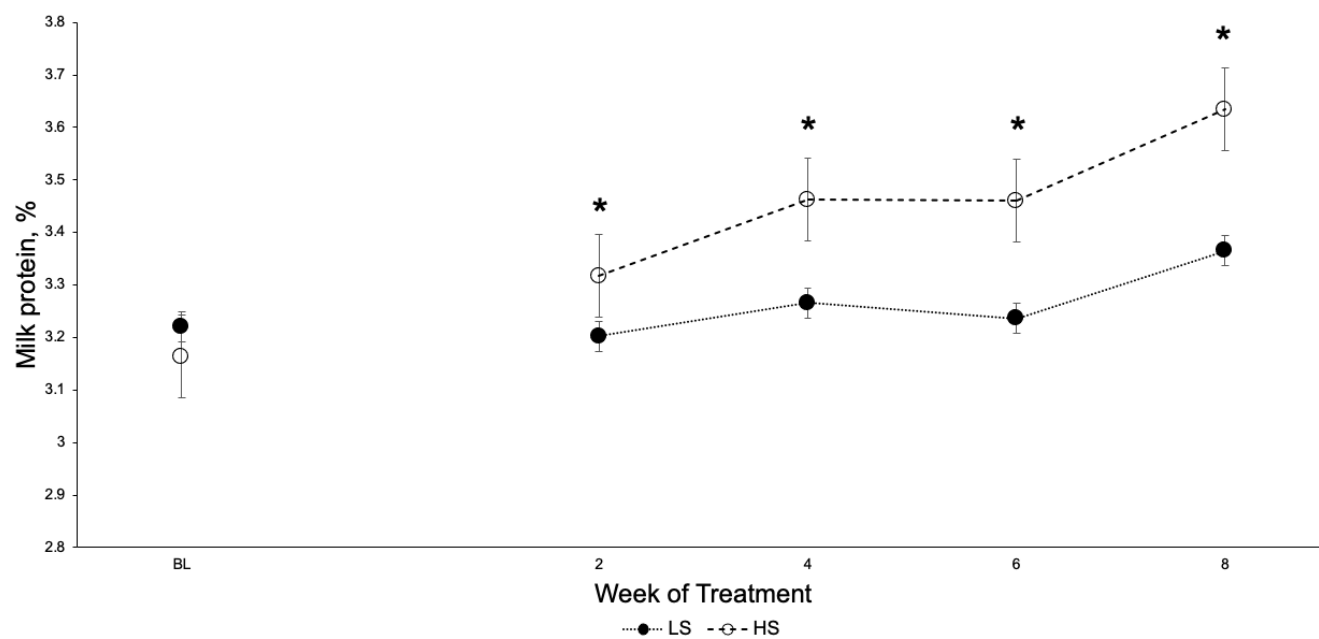


Figure S6. Effects of dietary starch concentration on milk protein contents. * Indicates a significant interaction ($P \leq 0.05$) between week and treatment.

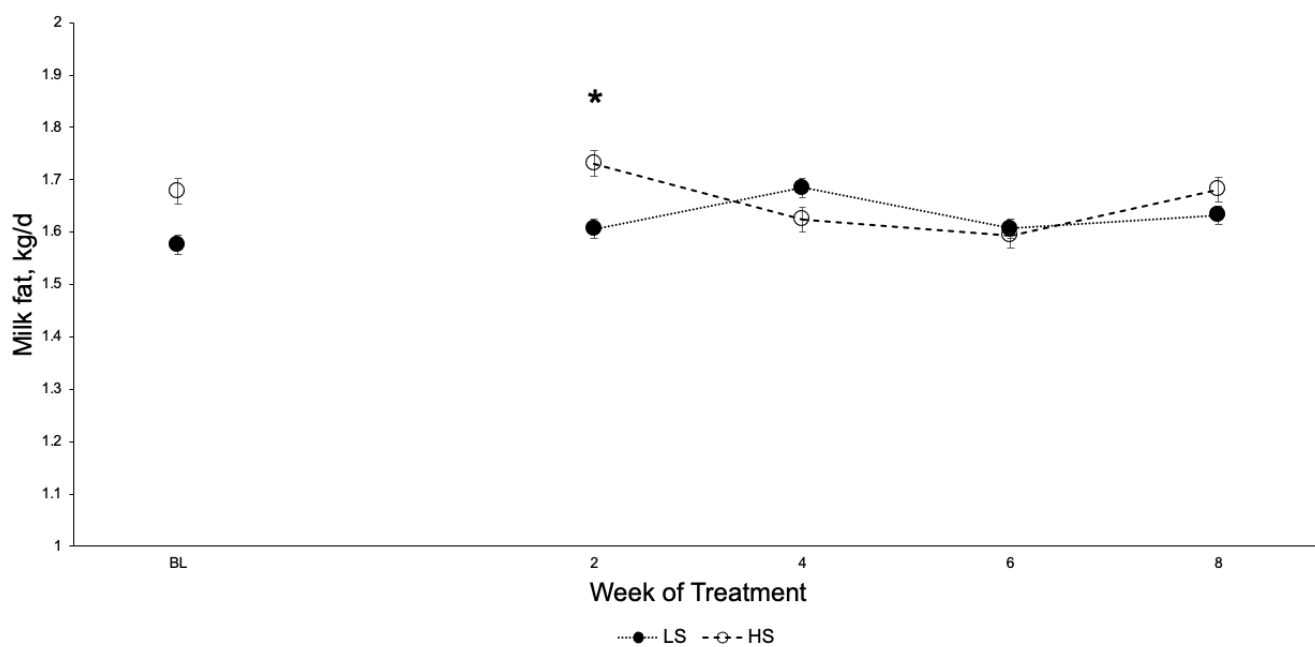


Figure S7. Effects of dietary starch concentration on milk fat yield. *Treatment \times Week, $P < 0.05$.

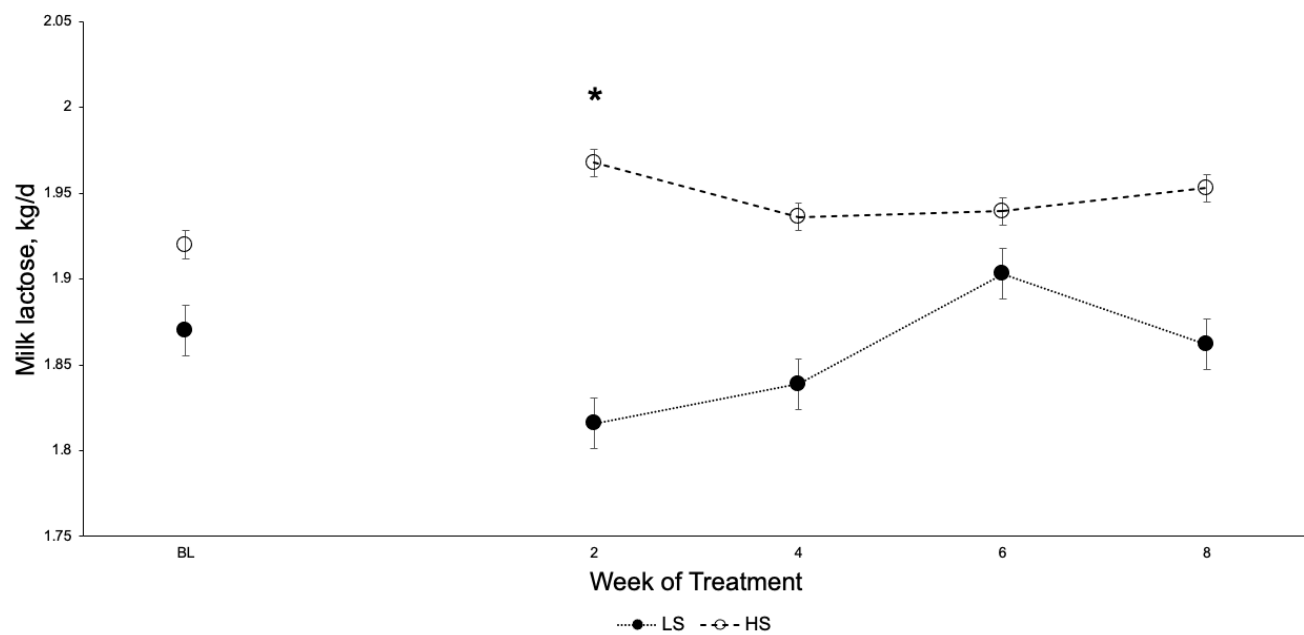


Figure S8. Effects of dietary starch concentration on milk lactose yield. *Treatment \times Week, $P < 0.05$.

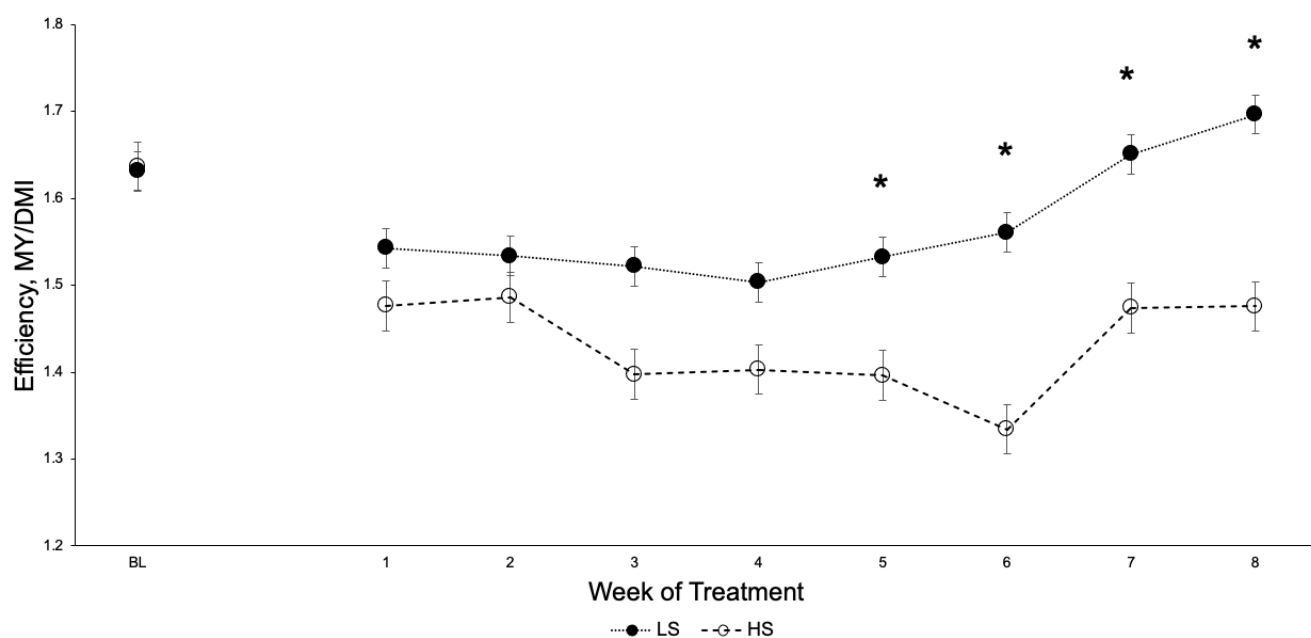


Figure S9. Effects of dietary starch concentration on feed efficiency (kg milk yield/kg dry matter intake). *Treatment \times Week, $P < 0.05$.

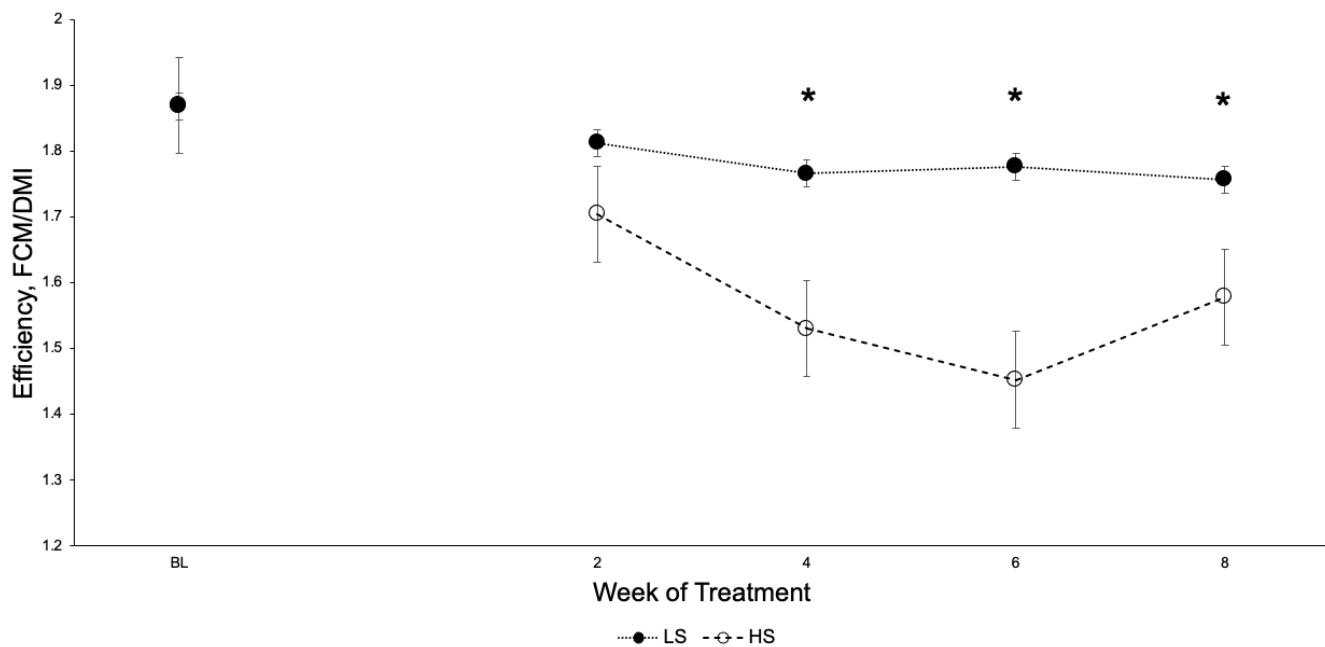


Figure S10. Effects of dietary starch concentration on feed efficiency (kg energy-corrected milk yield/kg dry matter intake). *Treatment \times Week, $P < 0.05$

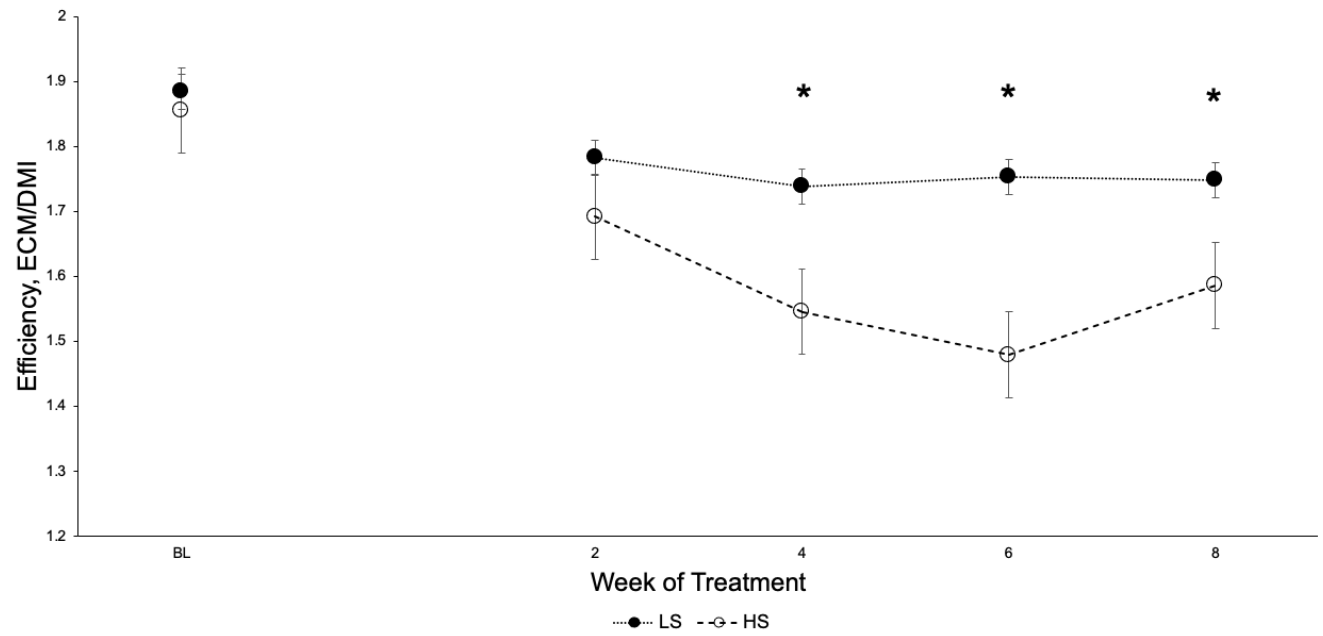


Figure S11. Effects of dietary starch concentration on feed efficiency (kg 3.5% fat-corrected milk yield/kg dry matter intake). *Treatment \times Week, $P < 0.05$.