

**Table S2:** Results from linear models investigating the association of *Ostertagia ostertagi* and *Fasciola hepatica* BTM ELISA results with average annual milk yield (kg), average milk protein (%) and average milk fat (%) content in high performance dairy (HD) and dual-purpose (DP) herds in southern Germany. Seropositivity categories are defined as follows: *O. ostertagi*: +: ODR  $\geq$  0.5, ++: ODR  $\geq$  0.8; *F. hepatica*: +: 30% < S/P  $\leq$  80%, ++: 80% < S/P < 150%, +++: S/P  $\geq$  150%.

	HD (N = 27) <sup>a</sup>				DP (N = 161)			
	Estimate	SE	t	P-value	Estimate	SE	t	P-value
<b>Milk yield (kg)<sup>b</sup></b>								
Intercept	14852.65	5802.40	2.56	<b>0.020</b>	8951.27	1746.67	5.13	<b>&lt; 0.001</b>
<i>O. ostertagi</i> +	117.36	330.26	0.36	0.727	-103.93	248.01	-0.42	0.676
<i>O. ostertagi</i> ++	-	-	-	-	-107.09	406.23	-0.26	0.792
<i>F. hepatica</i> +	-939.71	457.04	-2.06	0.056	19.18	499.30	0.04	0.969
<i>F. hepatica</i> ++	-296.89	578.31	-0.51	0.614	-363.50	347.90	-1.05	0.298
<i>F. hepatica</i> +++	-2411.40	898.22	-2.69	<b>0.016</b>	843.24	384.11	2.20	<b>0.030</b>
Lactation no.	-3882.50	4028.61	-0.96	0.349	-668.34	1134.60	-0.59	0.557
Lactation no. (squared)	586.24	662.85	0.88	0.389	104.52	183.55	0.57	0.570
SCS	-1.50	2.33	-0.65	0.528	-3.12	0.95	-3.27	<b>0.001</b>
No. of lactating animals	7.83	3.27	2.39	<b>0.029</b>	9.97	3.49	2.86	<b>0.005</b>
Farm type (ORG vs. CON)	271.69	644.91	0.42	0.679	-1606.45	340.18	-4.72	<b>&lt; 0.001</b>
Farm type (TRA vs. CON)	-	-	-	-	-523.23	452.80	-1.16	0.250
<b>Protein content (%)<sup>c</sup></b>								
Intercept	4.64	1.11	4.17	<b>0.001</b>	3.61	0.20	18.41	<b>&lt; 0.001</b>
<i>O. ostertagi</i> +	0.07	0.06	1.12	0.278	0.01	0.03	0.46	0.647
<i>O. ostertagi</i> ++	-	-	-	-	0.01	0.04	0.31	0.756
<i>F. hepatica</i> +	-0.06	0.10	-0.63	0.535	-0.04	0.05	-0.82	0.414
<i>F. hepatica</i> ++	0.05	0.11	0.43	0.671	-0.07	0.04	-1.94	0.054
<i>F. hepatica</i> +++	-0.43	0.20	-2.18	<b>0.043</b>	-0.04	0.04	-0.96	0.339
Lactation no.	-0.42	0.71	-0.59	0.563	-0.22	0.12	-1.87	0.063
Lactation no. (squared)	0.08	0.12	0.66	0.520	0.03	0.02	1.57	0.119
SCS	9.24 x10 <sup>-5</sup>	4.45 x10 <sup>-4</sup>	0.21	0.838	3.71 x10 <sup>-4</sup>	1.04 x10 <sup>-4</sup>	3.58	<b>&lt; 0.001</b>
farm type (ORG vs. CON)	0.08	0.12	0.64	0.533	-0.11	0.04	-2.93	<b>0.004</b>

farm type (TRA vs. CON)	-	-	-	-	-0.09	0.05	-1.81	0.073
Milk yield	-6.28 x10 <sup>-5</sup>	3.96 x10 <sup>-5</sup>	-1.59	0.131	2.82 x10 <sup>-5</sup>	8.37 x10 <sup>-5</sup>	3.36	<b>0.001</b>
<b>Milk fat (%)<sup>d</sup></b>								
Intercept	2.74	1.63	1.69	0.111	4.15	0.35	11.83	<b>&lt;0.001</b>
<i>O. ostertagi</i> +	-0.13	0.08	-1.58	0.133	-0.07	0.05	-1.59	0.114
<i>O. ostertagi</i> ++	-	-	-	-	-0.15	0.08	-2.00	<b>0.047</b>
<i>F. hepatica</i> +	-0.10	0.12	-0.85	0.408	0.06	0.09	0.61	0.545
<i>F. hepatica</i> ++	-0.13	0.14	-0.93	0.365	-0.07	0.06	-1.08	0.280
<i>F. hepatica</i> +++	-0.05	0.26	-0.20	0.845	-0.06	0.07	-0.89	0.377
Lactation no.	1.80	0.99	1.83	0.086	0.15	0.21	0.73	0.467
Lactation no. (squared)	-0.32	0.16	-1.97	0.066	-0.03	0.03	-0.92	0.357
SCS	-1.18 x10 <sup>-3</sup>	5.62 x10 <sup>-4</sup>	-2.10	0.052	3.36 x10 <sup>-4</sup>	1.83 x10 <sup>-4</sup>	1.83	0.069
No. of producing animals	-1.68 x10 <sup>-3</sup>	9.01 x10 <sup>-4</sup>	-1.87	0.080	-1.38 x10 <sup>-4</sup>	6.64 x10 <sup>-4</sup>	-0.21	0.836
Farm type (ORG vs. CON)	0.01	0.15	0.05	0.961	-0.07	0.07	-1.00	0.318
Farm type (TRA vs. CON)	-	-	-	-	-0.07	0.08	-0.84	0.401
Milk yield	-6.93 x10 <sup>-5</sup>	5.78 x10 <sup>-5</sup>	-1.20	0.248	-2.54 x10 <sup>-5</sup>	1.52 x10 <sup>-5</sup>	-1.67	0.097

<sup>a</sup> One outlier was excluded

<sup>b</sup> Full models were significantly different from null models containing only an intercept (HD: Df = 9, F = 6.9,  $P < 0.001$ ; DP: Df = 11, F = 6.8,  $P < 0.001$ )

<sup>c</sup> Only the DP model was significantly different from a null model containing only the intercept (HD: Df = 9, F = 0.99,  $P = 0.480$ ; DP: Df = 11, F = 6.2,  $P < 0.001$ )

<sup>d</sup> Only the DP model was significantly different from a null model containing only the intercept (HD: Df = 10, F = 2.2,  $P = 0.079$ ; DP: Df = 12, F = 2.7,  $P = 0.003$ )

Abbreviations: ORG, organic; CON, conventional; TRA, in transition from conventional to organic; SE, standard error; SCS, somatic cell score