

# Supplementary Materials: Co-Occurrence of Mycotoxins in Feed for Cattle, Pigs, Poultry, and Sheep in Navarra, a Region of Northern Spain

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**Table S1.** Obtained calibration curves in the chromatographic sequence in which feed for cattle was analysed.

ng/mL	AFG2		AFB2	
	B.C. (ng/mL)	RE (%)	B.C. (ng/mL)	RE (%)
0.126	0.119	5.5	0.117	7.2
0.189	0.180	4.9	0.181	4.5
0.252	0.252	0.0	0.248	1.5
0.315	0.315	0.1	0.315	0.0
0.504	0.515	2.1	0.521	3.4
0.63	0.645	2.5	0.646	2.6
1.26	1.250	0.8	1.248	1.0
	y=17.82x+0.83	R <sup>2</sup> =0.9994	y=57.62x+0.55	R <sup>2</sup> =0.9990
ng/mL	OTA		OTB	
	B.C. (ng/mL)	RE (%)	B.C. (ng/mL)	RE (%)
1	1.1	6.0	1.0	3.2
1.5	1.5	2.2	1.5	3.1
2	2.0	0.9	1.9	3.2
2.5	2.4	4.0	2.6	2.6
4	4.0	0.4	4.0	0.6
5	5.1	1.7	5.0	0.0
10	10.0	0.2	10.0	0.1
	y=7.19x+1.46	R <sup>2</sup> =0.9996	y=6.31x+0.61	R <sup>2</sup> =0.9998
ng/mL	AFG1		AFB1	
	B.C. (ng/mL)	RE (%)	B.C. (ng/mL)	RE (%)
0.4	0.4	5.9	0.4	6.0
0.6	0.6	2.9	0.6	0.1
0.8	0.8	0.6	0.8	3.2
1	1.0	1.5	1.0	3.2
1.6	1.6	1.4	1.6	0.3
2	2.1	3.8	2.0	1.9
4	4.0	0.9	4.0	0.3
	y=7.73x+0.18	R <sup>2</sup> =0.9991	y=23.68x+0.31	R <sup>2</sup> =0.9996
ng/mL	ZEA			
	B.C. (ng/mL)	RE (%)	B.C. (ng/mL)	RE (%)
8.4	7.8	7.5		
12.6	12.3	2.6		

16.8	17.0	0.9	
21	21.4	1.7	
33.6	33.0	1.8	
42	43.6	3.8	
84	83.4	0.7	
	$y=0.25x+1.74$	$R^2=0.9990$	

**Table S2.** Obtained calibration curves in the chromatographic sequence in which feed for pigs was analysed.

ng/mL	AFG2		AFB2	
	B.C. (ng/mL)	RE (%)	B.C. (ng/mL)	RE (%)
0.126	0.119	5.9	0.118	6.6
0.189	0.184	2.5	0.183	3.1
0.252	0.249	1.0	0.245	3.0
0.315	0.309	1.8	0.314	0.3
0.504	0.514	2.0	0.521	3.4
0.63	0.652	3.5	0.648	2.8
1.26	1.248	0.9	1.248	1.0
	$y=17.58x+1.19$	$R^2=0.9991$	$y=57.91x+0.51$	$R^2=0.9990$
ng/mL	OTA		OTB	
	B.C. (ng/mL)	RE (%)	B.C. (ng/mL)	RE (%)
1	1.1	5.7	0.9	6.3
1.5	1.5	2.1	1.5	2.8
2	2.0	0.2	1.9	3.9
2.5	2.4	3.9	2.6	4.2
4	4.0	0.5	4.1	2.2
5	5.1	2.2	5.0	1.0
10	10.0	0.3	9.9	0.6
	$y=7.18x+1.51$	$R^2=0.9995$	$y=6.20x+0.81$	$R^2=0.9994$
ng/mL	AFG1		AFB1	
	B.C. (ng/mL)	RE (%)	B.C. (ng/mL)	RE (%)
0.4	0.4	5.0	0.4	8.0
0.6	0.6	2.6	0.6	1.0
0.8	0.8	3.3	0.8	4.0
1	1.0	0.6	1.0	2.9
1.6	1.6	1.5	1.6	0.2
2	2.1	3.4	2.0	1.2
4	4.0	0.9	4.0	0.1
	$y=7.72x+0.09$	$R^2=0.9991$	$y=23.72x+0.18$	$R^2=0.9996$
ng/mL	ZEA			
	B.C. (ng/mL)	RE (%)	B.C. (ng/mL)	RE (%)
8.4	7.7	8.2		
12.6	12.7	0.4		
16.8	16.8	0.2		

21	20.4	2.8	
33.6	34.0	1.3	
42	43.6	3.8	
84	83.3	0.9	
	$y=0.25x+1.70$	$R^2=0.9990$	

**Table S3.** Obtained calibration curves in the chromatographic sequence in which feed for poultry was analysed.

ng/mL	AFG2		AFB2	
	B.C. (ng/mL)	RE (%)	B.C. (ng/mL)	RE (%)
0.126	0.118	6.1	0.114	9.6
0.189	0.185	1.9	0.178	5.7
0.252	0.246	2.5	0.247	2.0
0.315	0.309	1.8	0.313	0.7
0.504	0.523	3.7	0.527	4.6
0.63	0.646	2.6	0.654	3.9
1.26	1.248	0.9	1.243	1.3
	$y=17.50x+1.14$	$R^2=0.9990$	$y=57.59x+0.55$	$R^2=0.9982$
ng/mL	OTA		OTB	
	B.C. (ng/mL)	RE (%)	B.C. (ng/mL)	RE (%)
1	1.1	7.2	0.9	5.8
1.5	1.5	3.0	1.4	3.4
2	2.0	1.1	1.9	3.8
2.5	2.4	4.7	2.6	3.7
4	4.0	0.5	4.1	2.3
5	5.1	2.2	5.1	1.2
10	10.0	0.2	9.9	0.6
	$y=7.17x+1.50$	$R^2=0.9994$	$y=6.19x+0.84$	$R^2=0.9994$
ng/mL	AFG1		AFB1	
	B.C. (ng/mL)	RE (%)	B.C. (ng/mL)	RE (%)
0.4	0.4	8.6	0.4	7.2
0.6	0.6	3.0	0.6	0.5
0.8	0.8	4.2	0.8	4.2
1	1.0	1.5	1.0	3.7
1.6	1.6	2.3	1.6	0.7
2	2.1	4.0	2.0	1.9
4	4.0	1.1	4.0	0.3
	$y=7.70x+0.08$	$R^2=0.9986$	$y=23.66x+0.32$	$R^2=0.9995$
ng/mL	ZEA			
	B.C. (ng/mL)	RE (%)	B.C. (ng/mL)	RE (%)
8.4	7.6	9.0		
12.6	12.1	4.3		
16.8	16.6	1.3		
21	21.0	0.2		

33.6	34.3	2.1	
42	43.8	4.4	
84	83.0	1.2	
	y=0.24x+1.74 R <sup>2</sup> =0.9986		

**Table S4.** Obtained calibration curves in the chromatographic sequence in which feed for sheep was analysed.

ng/mL	AFG2		AFB2	
	B.C. (ng/mL)	RE (%)	B.C. (ng/mL)	RE (%)
0.126	0.118	6.0	0.118	6.7
0.189	0.175	7.6	0.180	5.0
0.252	0.258	2.4	0.244	3.1
0.315	0.312	1.1	0.311	1.4
0.504	0.525	4.3	0.531	5.3
0.63	0.638	1.2	0.648	2.9
1.26	1.250	0.8	1.245	1.2
	y=17.78x+0.91 R <sup>2</sup> =0.9990		y=57.60x+0.64 R <sup>2</sup> =0.9984	
ng/mL	OTA		OTB	
	B.C. (ng/mL)	RE (%)	B.C. (ng/mL)	RE (%)
1	1.1	8.2	0.9	8.4
1.5	1.5	2.1	1.5	3.2
2	2.0	0.7	1.9	3.0
2.5	2.4	5.4	2.6	3.7
4	4.0	0.0	4.1	2.6
5	5.1	2.6	5.1	1.3
10	10.0	0.3	9.9	0.7
	y=7.13x+1.64 R <sup>2</sup> =0.9992		y=6.21x+0.77 R <sup>2</sup> =0.9993	
ng/mL	AFG1		AFB1	
	B.C. (ng/mL)	RE (%)	B.C. (ng/mL)	RE (%)
0.4	0.4	2.4	0.4	7.2
0.6	0.6	3.8	0.6	0.5
0.8	0.8	4.3	0.8	4.2
1	1.0	1.6	1.0	3.7
1.6	1.6	1.5	1.6	0.7
2	2.1	2.9	2.0	1.9
4	4.0	0.8	4.0	0.3
	y=7.73x+0.10 R <sup>2</sup> =0.9992		y=23.66x+0.32 R <sup>2</sup> =0.9994	
ng/mL	ZEA			
	B.C. (ng/mL)	RE (%)	B.C. (ng/mL)	RE (%)
8.4	7.5	10.4		
12.6	12.8	1.3		
16.8	16.8	0.2		
21	21.0	0.1		
33.6	34.2	1.7		

42	42.6	1.4
84	83.5	0.6
y=0.25x+1.85		R2=0.9996

**Table S5.** Retention times for calibrators and samples for each mycotoxin.

	AFG2	AFG1	AFB2	AFB1	OTB	ZEA	OTA
Calibrators	11.06 ± 0.09	15.28 ± 0.08	19.60 ± 0.10	26.62 ± 0.05	33.58 ± 0.10	37.44 ± 0.09	39.93 ± 0.10
Samples	11.10 ± 0.10	15.30 ± 0.10	19.40 ± 0.10	26.70 ± 0.11	ND	37.50 ± 0.10	39.95 ± 0.09

**Table S6.** Levels (µg/kg) of mycotoxins in feed for cattle.

Sample	AFG2	AFG1	AFB2	AFB1	OTB	ZEA	OTA	DON	STER
cow-1	<LOD*	<LOD	<LOD	<LOD	<LOD	147	<LOD	<LOQ*	<LOQ
cow-2	<LOD	<LOD	1.37	<LOD	<LOD	239	<LOD	217	<LOQ
cow-3	<LOD	2.47	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
cow-4	2.51	<LOD	<LOD	<LOD	<LOD	<LOD	6.91	321	<LOQ
cow-5	<LOD	<LOD	<LOD	<LOD	<LOD	158	<LOD	115	<LOQ
cow-6	<LOD	<LOD	<LOD	<LOD	<LOD	169	<LOD	278	<LOQ
cow-7	<LOD	<LOD	<LOD	<LOD	<LOD	123	<LOD	402	<LOQ
cow-8	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
cow-9	<LOD	<LOD	<LOD	3.34	<LOD	66	<LOD	<LOQ	<LOQ
cow-10	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
cow-11	<LOD	<LOD	<LOD	3.06	<LOD	78	<LOD	123	<LOQ
cow-12	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
cow-13	2.11	<LOD	<LOD	<LOD	<LOD	334	<LOD	297	<LOQ
cow-14	<LOD	<LOD	<LOD	<LOD	<LOD	58	<LOD	321	<LOQ
cow-15	<LOD	2.92	<LOD	<LOD	<LOD	50	<LOD	125	<LOQ
cow-16	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	247	<LOQ
cow-17	<LOD	<LOD	<LOD	<LOD	<LOD	258	<LOD	164	<LOQ
cow-18	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	7.74	230	<LOQ
cow-19	<LOD	<LOD	2.56	<LOD	<LOD	<LOD	<LOD	87	<LOQ
cow-20	<LOD	<LOD	<LOD	<LOD	<LOD	146	<LOD	95	<LOQ
cow-21	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	99	<LOQ
cow-22	<LOD	<LOD	<LOD	4.31	<LOD	60	<LOD	97	<LOQ
cow-23	<LOD	<LOD	<LOD	<LOD	<LOD	68	<LOD	101	<LOQ
cow-24	0.66	<LOD	0.78	<LOD	<LOD	79	<LOD	<LOQ	<LOQ
cow-25	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
cow-26	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	100	<LOQ
cow-27	<LOD	<LOD	<LOD	<LOD	<LOD	65	<LOD	157	<LOQ
cow-28	<LOD	<LOD	1.49	5.43	<LOD	<LOD	<LOD	169	<LOQ
cow-29	<LOD	<LOD	<LOD	<LOD	<LOD	314	<LOD	<LOQ	<LOQ
cow-30	<LOD	<LOD	<LOD	<LOD	<LOD	210	<LOD	214	<LOQ
cow-31	<LOD	<LOD	<LOD	<LOD	<LOD	156	<LOD	201	<LOQ
cow-32	1.97	3.41	<LOD	<LOD	<LOD	<LOD	<LOD	364	<LOQ
cow-33	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	287	<LOQ
cow-34	<LOD	<LOD	<LOD	<LOD	<LOD	69	<LOD	304	<LOQ
cow-35	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	206	<LOQ
cow-36	<LOD	<LOD	0.94	<LOD	<LOD	<LOD	<LOD	127	<LOQ

Sample	AFG2	AFG1	AFB2	AFB1	OTB	ZEA	OTA	DON	STER
cow-37	<LOD	<LOD	<LOD	<LOD	<LOD	90.6	<LOD	156	<LOQ
cow-38	<LOD	<LOD	<LOD	2.47	<LOD	<LOD	<LOD	187	<LOQ
cow-39	0.97	<LOD	<LOD	<LOD	<LOD	110	<LOD	164	<LOQ
cow-40	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
cow-41	<LOD	<LOD	1.98	<LOD	<LOD	<LOD	<LOD	97	<LOQ
cow-42	<LOD	<LOD	<LOD	<LOD	<LOD	51	<LOD	<LOQ	<LOQ
cow-43	<LOD	<LOD	<LOD	<LOD	<LOD	58	<LOD	132	<LOQ
cow-44	<LOD	<LOD	<LOD	<LOD	<LOD	76	<LOD	125	<LOQ
cow-45	0.83	3.03	<LOD	<LOD	<LOD	73	<LOD	120	<LOQ
cow-46	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	117	<LOQ
cow-47	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	99	<LOQ
cow-48	<LOD	<LOD	<LOD	2.85	<LOD	<LOD	<LOD	105	<LOQ
cow-49	<LOD	<LOD	<LOD	<LOD	<LOD	95.7	<LOD	132	<LOQ
cow-50	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	5.39	165	<LOQ
cow-51	<LOD	<LOD	<LOD	<LOD	<LOD	80	<LOD	154	<LOQ
cow-52	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	197	<LOQ
cow-53	<LOD	<LOD	<LOD	<LOD	<LOD	85.6	<LOD	146	<LOQ
cow-54	<LOD	<LOD	<LOD	3.14	<LOD	<LOD	<LOD	198	<LOQ
cow-55	3.25	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	177	<LOQ
cow-56	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	161	<LOQ
cow-57	<LOD	<LOD	<LOD	<LOD	<LOD	101	<LOD	147	<LOQ
cow-58	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
cow-59	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	115	<LOQ
cow-60	<LOD	<LOD	<LOD	<LOD	<LOD	99.8	<LOD	136	<LOQ
cow-61	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	107	<LOQ
cow-62	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
cow-63	1.29	<LOD	1.32	<LOD	<LOD	118	<LOD	115	<LOQ
cow-64	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
cow-65	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
cow-66	<LOD	<LOD	<LOD	2.41	<LOD	214	5.87	189	<LOQ
cow-67	<LOD	<LOD	<LOD	<LOD	<LOD	254	<LOD	117	<LOQ
cow-68	<LOD	<LOD	<LOD	<LOD	<LOD	126	<LOD	235	<LOQ
cow-69	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	6.64	97	<LOQ
cow-70	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	123	<LOQ
cow-71	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
cow-72	<LOD	2.66	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
cow-73	<LOD	<LOD	<LOD	<LOD	<LOD	98.8	<LOD	165	<LOQ
cow-74	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
cow-75	<LOD	<LOD	<LOD	<LOD	<LOD	88.5	<LOD	177	<LOQ
cow-76	<LOD	<LOD	3.21	4.87	<LOD	<LOD	<LOD	189	<LOQ
cow-77	<LOD	<LOD	<LOD	<LOD	<LOD	114	<LOD	115	<LOQ
cow-78	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	165	<LOQ
cow-79	<LOD	<LOD	<LOD	<LOD	<LOD	155	<LOD	235	<LOQ
cow-80	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	81	<LOQ
cow-81	<LOD	<LOD	0.7	<LOD	<LOD	<LOD	<LOD	<LOQ	3.3
cow-82	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	101	3.9



Sample	AFG2	AFG1	AFB2	AFB1	OTB	ZEA	OTA	DON	STER
pig-23	<LOD	<LOD	<LOD	6.13	<LOD	328	<LOD	99	<LOQ
pig-24	0.76	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	84	<LOQ
pig-25	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	76	<LOQ
pig-26	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	102	2.1
pig-27	<LOD	<LOD	<LOD	<LOD	<LOD	236	<LOD	281	<LOQ
pig-28	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	191	<LOQ
pig-29	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	193	3.9
pig-30	<LOD	<LOD	1.89	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
pig-31	0.7	<LOD	1.97	5.89	<LOD	114	<LOD	111	<LOQ
pig-32	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
pig-33	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	89	<LOQ
pig-34	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	187	<LOQ
pig-35	<LOD	<LOD	<LOD	<LOD	<LOD	89.9	<LOD	145	<LOQ
pig-36	<LOD	<LOD	<LOD	<LOD	<LOD	98.5	65.5	162	<LOQ
pig-37	<LOD	<LOD	<LOD	<LOD	<LOD	107	<LOD	87	<LOQ
pig-38	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	130	<LOQ
pig-39	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	145	<LOQ
pig-40	3.12	5.1	<LOD	<LOD	<LOD	<LOD	<LOD	117	<LOQ
pig-41	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	89	<LOQ
pig-42	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	96	<LOQ
pig-43	3.98	3.08	<LOD	<LOD	<LOD	389	<LOD	187	<LOQ
pig-44	<LOD	<LOD	2.25	4.63	<LOD	92.3	5.91	130	<LOQ
pig-45	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
pig-46	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
pig-47	<LOD	<LOD	<LOD	<LOD	<LOD	105	<LOD	<LOQ	<LOQ
pig-48	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	145	<LOQ
pig-49	<LOD	6.03	<LOD	6.24	<LOD	<LOD	<LOD	<LOQ	<LOQ
pig-50	<LOD	<LOD	0.81	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
pig-51	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	165	<LOQ
pig-52	<LOD	<LOD	<LOD	<LOD	<LOD	168	<LOD	314	<LOQ
pig-53	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
pig-54	<LOD	<LOD	<LOD	<LOD	<LOD	142	<LOD	225	<LOQ
pig-55	1.31	2.64	<LOD	<LOD	<LOD	115	<LOD	76	<LOQ
pig-56	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
pig-57	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
pig-58	<LOD	<LOD	<LOD	<LOD	<LOD	160	<LOD	158	<LOQ
pig-59	<LOD	<LOD	2.87	<LOD	<LOD	<LOD	<LOD	112	<LOQ
pig-60	<LOD	<LOD	<LOD	<LOD	<LOD	74	<LOD	<LOQ	<LOQ
pig-61	0.84	<LOD	<LOD	<LOD	<LOD	80	<LOD	223	<LOQ
pig-62	<LOD	<LOD	<LOD	<LOD	<LOD	59	<LOD	<LOQ	<LOQ
pig-63	<LOD	<LOD	<LOD	<LOD	<LOD	74	<LOD	278	<LOQ
pig-64	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	91	<LOQ
pig-65	<LOD	2.15	<LOD	<LOD	<LOD	<LOD	<LOD	100	<LOQ
pig-66	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
pig-67	<LOD	<LOD	<LOD	<LOD	<LOD	254	42.3	129	<LOQ
pig-68	<LOD	4.51	<LOD	<LOD	<LOD	<LOD	<LOD	100	<LOQ







[illegible]

\*LOD (ug/kg)    0.63    2.0    0.63    2.0    5.0    42.0    5.0  
\*LOQ (ug/kg)    1.26    4.0    1.26    4.0    10.0    84.0    10.0    74.0    0.8  
Italics: value >LOD <LOQ

**Table S9.** Levels (µg/kg) of mycotoxins in feed for sheep.

<b>Sample</b>	<b>AFG2</b>	<b>AFG1</b>	<b>AFB2</b>	<b>AFB1</b>	<b>OTB</b>	<b>ZEA</b>	<b>OTA</b>	<b>DON</b>	<b>STER</b>
sheep-1	<LOD*	<LOD	<LOD	<LOD	<LOD	74	<LOD	<LOQ*	<LOQ
sheep-2	<LOD	<LOD	<LOD	5.13	<LOD	121	<LOD	315	<LOQ
sheep-3	<LOD	<LOD	0.78	<LOD	<LOD	<LOD	<LOD	287	<LOQ
sheep-4	0.64	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
sheep-5	<LOD	<LOD	<LOD	<LOD	<LOD	60	<LOD	<LOQ	<LOQ
sheep-6	<LOD	<LOD	<LOD	<LOD	<LOD	157	<LOD	97	<LOQ
sheep-7	<LOD	<LOD	<LOD	3.12	<LOD	<LOD	5.47	<LOQ	<LOQ
sheep-8	2.21	<LOD	2.58	<LOD	<LOD	71	<LOD	80	<LOQ
sheep-9	<LOD	<LOD	<LOD	<LOD	<LOD	225	<LOD	122	<LOQ
sheep-10	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
sheep-11	<LOD	5.21	<LOD	<LOD	<LOD	<LOD	<LOD	101	<LOQ
sheep-12	<LOD	<LOD	<LOD	<LOD	<LOD	325	<LOD	354	<LOQ
sheep-13	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
sheep-14	<LOD	<LOD	<LOD	<LOD	<LOD	68	<LOD	200	<LOQ
sheep-15	<LOD	<LOD	3.21	<LOD	<LOD	452	<LOD	258	<LOQ
sheep-16	<LOD	<LOD	<LOD	2.18	<LOD	79	<LOD	<LOQ	<LOQ
sheep-17	<LOD	3.12	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
sheep-18	<LOD	<LOD	<LOD	<LOD	<LOD	129	<LOD	113	<LOQ
sheep-19	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
sheep-20	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	136	<LOQ
sheep-21	<LOD	<LOD	4.85	<LOD	<LOD	88.4	15.1	118	<LOQ
sheep-22	3.12	<LOD	<LOD	<LOD	<LOD	125	<LOD	225	<LOQ
sheep-23	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
sheep-24	<LOD	6.54	1.56	6.13	<LOD	452	<LOD	290	<LOQ
sheep-25	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
sheep-26	<LOD	<LOD	<LOD	<LOD	<LOD	46	<LOD	222	<LOQ
sheep-27	2.54	<LOD	<LOD	<LOD	<LOD	57	<LOD	335	<LOQ
sheep-28	2.68	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	89	<LOQ
sheep-29	<LOD	<LOD	0.93	<LOD	<LOD	226	29.3	101	<LOQ
sheep-30	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	190	<LOQ
sheep-31	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	132	<LOQ
sheep-32	<LOD	<LOD	<LOD	<LOD	<LOD	114	<LOD	154	<LOQ
sheep-33	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	168	5.6
sheep-34	0.79	4.18	<LOD	<LOD	<LOD	<LOD	<LOD	330	<LOQ
sheep-35	<LOD	<LOD	<LOD	3.19	<LOD	97.5	11.2	<LOQ	<LOQ
sheep-36	<LOD	<LOD	1.57	<LOD	<LOD	<LOD	<LOD	115	<LOQ
sheep-37	<LOD	<LOD	<LOD	<LOD	<LOD	165	<LOD	440	<LOQ
sheep-38	<LOD	<LOD	<LOD	<LOD	<LOD	158	<LOD	397	<LOQ
sheep-39	<LOD	<LOD	<LOD	<LOD	<LOD	178	<LOD	232	<LOQ
sheep-40	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	93	<LOQ
sheep-41	<LOD	<LOD	<LOD	<LOD	<LOD	215	<LOD	114	<LOQ

Sample	AFG2	AFG1	AFB2	AFB1	OTB	ZEA	OTA	DON	STER
sheep-42	<LOD	2.87	<LOD	4.21	<LOD	425	<LOD	354	<LOQ
sheep-43	0.87	<LOD	<LOD	<LOD	<LOD	<LOD	45.3	85	<LOQ
sheep-44	<LOD	<LOD	2.1	<LOD	<LOD	501	<LOD	321	<LOQ
sheep-45	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
sheep-46	<LOD	<LOD	<LOD	<LOD	<LOD	458	<LOD	887	<LOQ
sheep-47	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	332	<LOQ
sheep-48	<LOD	4.87	<LOD	<LOD	<LOD	232	<LOD	546	<LOQ
sheep-49	<LOD	<LOD	<LOD	<LOD	<LOD	220	26.8	128	<LOQ
sheep-50	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	741	<LOQ
sheep-51	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	332	<LOQ
sheep-52	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
sheep-53	<LOD	<LOD	<LOD	<LOD	<LOD	338	<LOD	<LOQ	<LOQ
sheep-54	3.58	<LOD	<LOD	<LOD	<LOD	187	<LOD	215	<LOQ
sheep-55	<LOD	<LOD	0.86	<LOD	<LOD	<LOD	<LOD	389	<LOQ
sheep-56	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	466	<LOQ
sheep-57	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	336	<LOQ
sheep-58	<LOD	<LOD	<LOD	4.56	<LOD	248	<LOD	213	<LOQ
sheep-59	3.12	<LOD	<LOD	<LOD	<LOD	68	<LOD	213	<LOQ
sheep-60	<LOD	<LOD	<LOD	<LOD	<LOD	54	<LOD	201	<LOQ
sheep-61	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	302	<LOQ
sheep-62	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	300	<LOQ
sheep-63	<LOD	2.17	<LOD	<LOD	<LOD	658	<LOD	<LOQ	<LOQ
sheep-64	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
sheep-65	<LOD	<LOD	<LOD	<LOD	<LOD	420	<LOD	125	<LOQ
sheep-66	0.68	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	187	<LOQ
sheep-67	<LOD	<LOD	3.25	4.69	<LOD	125	<LOD	145	<LOQ
sheep-68	<LOD	<LOD	<LOD	<LOD	<LOD	61	<LOD	160	<LOQ
sheep-69	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	97	<LOQ
sheep-70	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	6.1	<LOQ	<LOQ
sheep-71	1.87	5.13	<LOD	<LOD	<LOD	86.5	<LOD	221	<LOQ
sheep-72	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
sheep-73	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
sheep-74	<LOD	<LOD	<LOD	<LOD	<LOD	98.5	<LOD	101	<LOQ
sheep-75	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
sheep-76	<LOD	<LOD	<LOD	2.78	<LOD	<LOD	<LOD	114	<LOQ
sheep-77	0.73	3.65	<LOD	<LOD	<LOD	445	<LOD	418	<LOQ
sheep-78	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
sheep-79	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
sheep-80	<LOD	<LOD	<LOD	<LOD	<LOD	147	<LOD	321	<LOQ
sheep-81	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
sheep-82	<LOD	<LOD	2.87	5.13	<LOD	89.8	<LOD	158	<LOQ
sheep-83	4.01	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
sheep-84	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	225	<LOQ
sheep-85	<LOD	<LOD	<LOD	<LOD	<LOD	94.3	30.8	335	<LOQ
sheep-86	<LOD	<LOD	<LOD	<LOD	<LOD	159	<LOD	<LOQ	<LOQ
sheep-87	<LOD	<LOD	0.84	<LOD	<LOD	143	<LOD	114	<LOQ

Sample	AFG2	AFG1	AFB2	AFB1	OTB	ZEA	OTA	DON	STER
sheep-88	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	148	<LOQ
sheep-89	<LOD	<LOD	<LOD	5.64	<LOD	257	<LOD	156	<LOQ
sheep-90	0.84	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	274	2.2
sheep-91	<LOD	<LOD	<LOD	<LOD	<LOD	306	<LOD	315	<LOQ
sheep-92	<LOD	<LOD	2.96	<LOD	<LOD	<LOD	<LOD	<LOQ	<LOQ
sheep-93	<LOD	<LOD	<LOD	<LOD	<LOD	59	<LOD	425	<LOQ
sheep-94	2.1	<LOD	<LOD	<LOD	<LOD	258	<LOD	<LOQ	3.1
sheep-95	<LOD	<LOD	0.77	<LOD	<LOD	<LOD	<LOD	332	<LOQ
sheep-96	0.9	<LOD	<LOD	<LOD	<LOD	225	<LOD	214	4.1
sheep-97	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	97	3.6
sheep-98	<LOD	<LOD	1.33	<LOD	<LOD	319	<LOD	115	<LOQ
sheep-99	<LOD	4.83	<LOD	<LOD	<LOD	<LOD	<LOD	107	<LOQ
sheep-100	<LOD	<LOD	<LOD	5.81	<LOD	101	<LOD	81	<LOQ

\*LOD (ug/kg)

0.63

2.0

0.63

2.0

5.0

42.0

5.0

\*LOQ (ug/kg)

1.26

4.0

1.26

4.0

10.0

84.0

10.0

74.0

0.8

Italics: value >LOD <LOQ

**Table S10.** Correlation matrix (p=0.05).

	AFG2	AFG1	AFB2	AFB1	OTB	ZEA	OTA	DON	STER
<b>AFG2</b>	1								
<b>AFG1</b>	0.2528*	1							
<b>AFB2</b>	0.0205	0.0155	1						
<b>AFB1</b>	-0.0328	0.0657	0.1736*	1	-				
<b>OTB</b>	-	-	-	-	-				
<b>ZEA</b>	0.1149*	0.1594*	0.1040*	0.0509	-	1			
<b>OTA</b>	-0.0368	-0.0283	0.047	-0.0387	-	0.0686	1		
<b>DON</b>	0.0441	0.1025*	0.0358	0.0632	-	0.3129*	-0.058	1	
<b>STER</b>	-0.0336	-0.0137	0.0051	-0.0297	-	-0.0083	0.0158	-0.0002	1