

Effect of Dietary L-Threonine and Toxin Binder on Performance, Blood Parameters, and Immune Response of Broilers Exposed to Aflatoxin B₁

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Table S1. Interaction effect between L-Threonine and Mycofix Plus (MP); on breast meat yield and LDL¹ of broilers, Cobb 500².

Independent Variables		Breast	LDL
L-Threonine, % of Requirements	MP, g/kg	Relative Weight, % of Live Body Weight	mg/dl
100	0	21.32 ^{ab}	24.37 ^b
100	1	20.06 ^b	33.88 ^{ab}
125	0	21.28 ^{ab}	36.22 ^a
125	1	21.89 ^a	29.59 ^{ab}
<i>P</i> -value		*	*

^{a,b}Means within a column with differing superscripts are significantly different at **P* < 0.05. ¹Low-Density Lipoprotein. ²Means represent 16 pens of chickens with 10 birds per pen (*n* = 16/group).

Table S2. Interaction effect between Mycofix Plus (MP) and Aflatoxin B₁, on Cholesterol, HDL¹, ALT², and LDH³ of broilers, Cobb 500⁴.

Independent Variables		Cholesterol	HDL	ALT	LDH
MP, g/kg	Aflatoxin B ₁ , 500 ppb	mg/dl	mg/dl	u/l	u/l
0	-	131.91 ^{ab}	80.31 ^a	3.88 ^b	811.00 ^{ab}
0	+	122.92 ^b	74.31 ^b	5.31 ^a	1074.88 ^a
1	-	124.81 ^{ab}	77.00 ^{ab}	4.85 ^{ab}	936.69 ^{ab}
1	+	133.29 ^a	78.88 ^{ab}	4.13 ^{ab}	760.38 ^b
<i>P</i> -value		*	*	*	*

^{a,b}Means within a column with differing superscripts are significantly different at **P* < 0.05. ¹High-Density Lipoprotein. ²Alanine aminotransferase. ³Lactate dehydrogenase. ⁴Means represent 16 pens of chickens with 10 birds per pen (*n* = 16/group).

Table S3. Interaction effect between L-Threonine and Mycofix Plus (MP), on IBV¹ titer of broilers, Cobb 500².

Independent Variables		IBV
L-Threonine, % of Requirements	MP, g/kg	Log ₁₀
100	0	3.829 ^{ab}
100	1	3.824 ^{ab}
125	0	3.823 ^b
125	1	3.830 ^a
<i>P</i> -value		**

^{a,b}Means within a column with differing superscripts are significantly different at ***P* < 0.01. ¹Infectious Bronchitis Virus. ²Means represent 16 pens of chickens with 10 birds per pen (*n* = 16/group).

Table S4. Interaction effect between Mycofix Plus (MP) and Aflatoxin B₁ on IBV¹ titer of broilers, Cobb 500².

Independent Variables		IBV ²
MP, g/kg	Aflatoxin B ₁ , ppb	Log ₁₀
0	-	3.831 ^a
0	+	3.821 ^b
1	-	3.826 ^{ab}
1	+	3.827 ^a
<i>P</i> -value		**

^{a,b}Means within a column with differing superscripts are significantly different at ***P* < 0.01. ¹Infectious Bronchitis Virus. ²Means represent 16 pens of chickens with 10 birds per pen (*n* = 16/group).

Table S5. Effect of L-Threonine and Mycofix Plus (MP) on meat quality of broilers exposed to Aflatoxin B₁, Cobb 500.

Treatments	L-Threonine, % of Requirements	MP, g/kg	Aflatoxin B ₁ , 500 ppb	pH	WHC ¹ %	Cook Loss %	MDA ² , Breast mg MDA/kg of meat	MDA, Drumstick mg MDA/kg of meat
T ₁	100	0	-	5.93	46.12	23.28	1.39	2.46
T ₂	100	0	+	5.88	47.06	25.42	1.41	2.28
T ₃	100	1	-	5.91	48.80	24.75	1.32	2.23
T ₄	100	1	+	5.94	46.93	21.52	1.54	2.38
T ₅	125	0	-	5.86	47.66	22.72	1.43	2.36
T ₆	125	0	+	5.92	47.47	23.66	1.55	2.46
T ₇	125	1	-	5.89	50.91	23.09	1.68	2.34
T ₈	125	1	+	5.90	50.85	23.48	1.53	2.29
Pooled SEM				0.04	2.15	1.37	0.12	0.16
Main Effects		Levels		Means ³				
L-Threonine		100		5.91	47.23	23.74	1.41	2.34
		125		5.89	49.22	23.24	1.55	2.36
Mycofix Plus		0		5.90	47.08	23.77	1.44	2.39
		1		5.91	49.37	23.21	1.52	2.31
Aflatoxin B ₁		-		5.90	48.37	23.46	1.45	2.35
		+		5.91	48.08	23.52	1.51	2.35
Main Effects and Interaction Effects				<i>P</i> -values				
L-Threonine				NS	NS	NS	NS	NS
Mycofix Plus				NS	NS	NS	NS	NS
Aflatoxin B ₁				NS	NS	NS	NS	NS
L-Threonine × Mycofix Plus				NS	NS	NS	NS	NS
L-Threonine × Aflatoxin B ₁				NS	NS	NS	NS	NS
Mycofix Plus × Aflatoxin B ₁				NS	NS	NS	NS	NS
L-Threonine × Mycofix Plus × Aflatoxin B ₁				NS	NS	NS	NS	NS

¹Water Holding Capacity. ²Malondialdehyde. ³Means represent 32 pens of chickens with 10 birds per pen (*n* = 32/group). NS, *P* ≥ 0.05.

Table S6. Effect of L-Threonine and Mycofix Plus (MP) on cecal microflora of broilers exposed to Aflatoxin B₁, Cobb 500.

Treatments	L-Threonine, % of Requirements	MP, g/kg	Aflatoxin B ₁ , 500 ppb	TAC ¹	<i>E. coli</i> ²	<i>Lactobacilli</i>
				CFU ³	CFU	CFU
T ₁	100	0	-	8.30	8.13	8.02
T ₂	100	0	+	8.36	8.20	8.24
T ₃	100	1	-	8.37	7.92	8.24
T ₄	100	1	+	8.28	8.02	8.05
T ₅	125	0	-	8.36	7.96	8.23
T ₆	125	0	+	8.34	7.75	8.17
T ₇	125	1	-	8.22	8.00	8.26
T ₈	125	1	+	8.39	8.05	8.24
Pooled SEM				0.09	0.16	0.11
Main Effects			Levels	Means ⁴		
L-Threonine			100	8.33	8.07	8.14
			125	8.32	7.94	8.22
Mycofix Plus			0	8.34	8.01	8.16
			1	8.31	8.00	8.20
Aflatoxin B ₁			-	8.31	8.00	8.19
			+	8.34	8.01	8.18
Main Effects and Interaction Effects				<i>P</i> -values		
L-Threonine				NS	NS	NS
Mycofix Plus				NS	NS	NS
Aflatoxin B ₁				NS	NS	NS
L-Threonine × Mycofix Plus				NS	NS	NS
L-Threonine × Aflatoxin B ₁				NS	NS	NS
Mycofix Plus × Aflatoxin B ₁				NS	NS	NS
L-Threonine × Mycofix Plus × Aflatoxin B ₁				NS	NS	NS

¹Total Aerobic Bacteria Counts. ²*Escherichia Coli*. ³Colony Forming Unit; Values are log₁₀ of colony-forming units of cecal content (CFU) g⁻¹. ⁴Means represent 32 pens of chickens with 10 birds per pen (*n* = 32/group). NS, *P* ≥ 0.05.