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## Tables and Figures

520 **Table 1.** Composition (g/kg, as-fed basis) of the experimental diets

Item	Starter feed (Week 1-3)	Grower feed (Week 4-5)
Corn	48.51	60.96
Wheat	8.40	4.12
Wheat bran	4.10	-
Soybean meal 48%	31.15	27.62
Vegetable oil	3.30	3.30
Limestone	1.20	0.95
Mono-calcium Phosphate	1.65	1.39
Salt	0.30	0.35
Vitamin-Mineral Premix <sup>1</sup>	0.30	0.30
Lysine-HCl	0.34	0.30
DL-Methionine	0.20	0.19
L-Threonine	0.13	0.11
L-Cystine	0.12	0.11
Cr <sub>2</sub> O <sub>3</sub>	0.30	0.30
Calculated values <sup>2</sup>		
Crude protein, %	22.0	20.0
Metabolizable energy, kcal/kg	3050	3200
Lysine, %	1.40	1.20
Methionine, %	0.64	0.60
Methionine + Cystine, %	1.00	0.93
Calcium, %	0.94	0.80
Phosphorus, %	0.43	0.37
SID <sup>3</sup> lysine	1.25	1.12
SID methionine	0.60	0.56
SID methionine + cystine	0.92	0.85

521 <sup>1</sup>Provided per kilogram of diet: vitamin A, 12,000 IU; vitamin D<sub>3</sub>, 2,500 IU; vitamin  
522 E, 30 IU; vitamin K<sub>3</sub>, 3 mg; D-pantothenic acid, 15 mg; nicotinic acid, 40 mg; choline, 400  
523 mg; and vitamin B<sub>12</sub>, 12 µg; Fe, 90 mg from iron sulfate; Cu, 8.8 mg from copper sulfate; Zn,  
524 100 mg from zinc oxide; Mn, 54 mg from manganese oxide; I, 0.35 mg from potassium iodide;  
525 Se, 0.30 mg from sodium selenite.

526 <sup>2</sup>The values were calculated based on the values of feedstuffs in NRC (1994) to meet  
527 or exceed the Ross 308 Broiler Nutrition Specifications (2019).

528 <sup>3</sup>Standardized ileal digestible

530  
531**Table 2.** Effect of dietary 3, 4, 5 trihydroxybenzoic acid and oregano supplementation on growth performance of coccidiosis challenged broiler chickens<sup>1</sup>

Period	Dietary Treatment <sup>2</sup>						SEM <sup>3</sup>	P-value
	NCNT	CNT	THB	COM100	COM150	COM200		
<b>Body weight, g</b>								
Day 1	47.38	47.46	47.55	47.36	47.48	47.52	0.052	0.883
Day 7	176.21	167.55	168.38	168.52	168.02	173.98	1.073	0.068
Day 14	441.50	425.00	428.89	445.98	440.03	445.98	4.013	0.558
Day 21	905.50 <sup>b</sup>	707.07 <sup>a</sup>	736.04 <sup>a</sup>	771.44 <sup>a</sup>	771.28 <sup>a</sup>	759.90 <sup>a</sup>	12.190	0.001
Day 28	1481.52 <sup>b</sup>	1162.39 <sup>a</sup>	1195.45 <sup>a</sup>	1256.91 <sup>a</sup>	1251.84 <sup>a</sup>	1252.86 <sup>a</sup>	19.121	0.001
Day 35	2090.51 <sup>c</sup>	1692.43 <sup>a</sup>	1802.57 <sup>ab</sup>	1857.08 <sup>b</sup>	1840.66 <sup>ab</sup>	1861.68 <sup>b</sup>	23.482	0.001
<b>Average daily gain, g/d</b>								
Day 7	18.40	17.16	17.26	17.31	17.22	18.07	0.154	0.066
Day 14	37.90	36.78	37.22	39.64	38.86	38.86	0.524	0.624
Day 21	66.29 <sup>b</sup>	40.30 <sup>a</sup>	43.88 <sup>a</sup>	46.49 <sup>a</sup>	47.32 <sup>a</sup>	44.85 <sup>a</sup>	1.502	0.001
Day 28	82.29 <sup>b</sup>	65.05 <sup>a</sup>	65.63 <sup>a</sup>	69.35 <sup>a</sup>	68.65 <sup>a</sup>	70.42 <sup>a</sup>	1.243	0.001
Day 35	87.00 <sup>b</sup>	75.72 <sup>a</sup>	86.73 <sup>b</sup>	85.74 <sup>b</sup>	84.12 <sup>ab</sup>	86.97 <sup>b</sup>	1.063	0.007
Day 1-14	28.15	26.97	27.24	28.47	28.04	28.46	0.286	0.552
Day 15-35	78.52 <sup>c</sup>	60.35 <sup>a</sup>	65.41 <sup>ab</sup>	67.20 <sup>ab</sup>	66.70 <sup>ab</sup>	67.42 <sup>b</sup>	1.058	0.001
Day 1-35	58.38 <sup>c</sup>	47.00 <sup>a</sup>	50.14 <sup>ab</sup>	51.71 <sup>b</sup>	51.23 <sup>ab</sup>	51.83 <sup>b</sup>	0.671	0.001
<b>Average daily feed intake, g/d</b>								
Day 7	24.17 <sup>a</sup>	24.26 <sup>ab</sup>	27.16 <sup>bc</sup>	27.53 <sup>c</sup>	28.06 <sup>c</sup>	27.19 <sup>c</sup>	0.358	0.001
Day 14	54.87	51.82	51.26	53.73	53.20	54.62	0.668	0.569



Day 21	93.75 <sup>b</sup>	73.39 <sup>a</sup>	73.00 <sup>a</sup>	65.63 <sup>a</sup>	72.70 <sup>a</sup>	70.76 <sup>a</sup>	1.624	0.001
Day 28	117.94	113.58	110.94	113.62	115.97	113.81	0.986	0.445
Day 35	133.42 <sup>ab</sup>	131.96 <sup>a</sup>	140.36 <sup>c</sup>	139.42 <sup>ab</sup>	140.36 <sup>c</sup>	141.26 <sup>c</sup>	1.022	0.015
Day 1-14	39.52	38.04	39.21	40.63	40.63	40.91	0.439	0.393
Day 15-35	115.04 <sup>b</sup>	106.31 <sup>a</sup>	108.10 <sup>a</sup>	106.22 <sup>a</sup>	109.68 <sup>ab</sup>	108.61 <sup>ab</sup>	0.756	0.003
Day 1-35	84.83 <sup>b</sup>	79.00 <sup>a</sup>	80.54 <sup>ab</sup>	79.99 <sup>ab</sup>	82.06 <sup>ab</sup>	81.53 <sup>ab</sup>	0.540	0.026

**Feed conversion ratio, g/g**

Day 7	1.32 <sup>a</sup>	1.42 <sup>ab</sup>	1.58 <sup>ab</sup>	1.59 <sup>bc</sup>	1.64 <sup>c</sup>	1.51 <sup>abc</sup>	0.026	0.001
Day 14	1.47	1.41	1.38	1.36	1.38	1.42	0.025	0.891
Day 21	1.42 <sup>a</sup>	1.83 <sup>b</sup>	1.69 <sup>ab</sup>	1.43 <sup>a</sup>	1.54 <sup>ab</sup>	1.60 <sup>ab</sup>	0.036	0.002
Day 28	1.44 <sup>a</sup>	1.75 <sup>b</sup>	1.70 <sup>b</sup>	1.65 <sup>ab</sup>	1.70 <sup>b</sup>	1.62 <sup>ab</sup>	0.026	0.005
Day 35	1.54	1.75	1.62	1.64	1.68	1.63	0.022	0.135
Day 1-14	1.41	1.41	1.44	1.43	1.45	1.45	0.021	0.989
Day 15-35	1.47 <sup>a</sup>	1.76 <sup>c</sup>	1.66 <sup>bc</sup>	1.59 <sup>ab</sup>	1.65 <sup>bc</sup>	1.62 <sup>abc</sup>	0.020	0.001
Day 1-35	1.46 <sup>a</sup>	1.68 <sup>b</sup>	1.61 <sup>b</sup>	1.55 <sup>ab</sup>	1.60 <sup>ab</sup>	1.58 <sup>ab</sup>	0.017	0.002

532 <sup>1</sup>Values are the mean of six replicates per treatment; <sup>a-c</sup> Values in a row with different superscripts differ significantly (P < 0.05).

533 <sup>2</sup>NCNT, non-challenged without any dietary treatment; CNT, challenged without any dietary treatment; THB, CNT with 3,4,5  
534 trihydroxybenzoic acid at 0.1 g per kg; COM100, CNT with combination of THB and oregano extract at 0.1 g per kg; COM150, CNT with  
535 combination of THB and oregano extract at 0.15 g per kg; COM200, CNT with combination of THB and oregano extract at 0.2 g per kg.

536 <sup>3</sup>Standard error of the mean.

537

538 **Table 3.** Effect of dietary 3, 4, 5 trihydroxybenzoic acid and oregano supplementation on lesion score in caeca, jejunum and ileum of coccidiosis  
 539 challenged broiler chickens<sup>1</sup>

Period	Dietary Treatment <sup>2</sup>						SEM <sup>3</sup>	P-value
	NCNT	CNT	THB	COM100	COM150	COM200		
<b>Jejunum</b>								
4 dpi <sup>4</sup>	0.00 <sup>a</sup>	2.79 <sup>c</sup>	2.14 <sup>bc</sup>	1.71 <sup>b</sup>	1.79 <sup>b</sup>	1.57 <sup>b</sup>	0.153	0.001
7 dpi <sup>4</sup>	0.00 <sup>a</sup>	2.00 <sup>c</sup>	1.14 <sup>bc</sup>	0.93 <sup>ab</sup>	1.21 <sup>bc</sup>	1.64 <sup>bc</sup>	0.134	0.001
<b>Ileum</b>								
4 dpi <sup>4</sup>	0.00 <sup>a</sup>	1.43 <sup>b</sup>	0.57 <sup>ab</sup>	0.71 <sup>ab</sup>	0.79 <sup>ab</sup>	0.64 <sup>ab</sup>	0.121	0.032
7 dpi <sup>4</sup>	0.00 <sup>a</sup>	1.71 <sup>c</sup>	1.00 <sup>b</sup>	0.86 <sup>b</sup>	0.57 <sup>ab</sup>	0.79 <sup>b</sup>	0.098	0.001
<b>Caeca</b>								
4 dpi <sup>4</sup>	0.00 <sup>a</sup>	1.64 <sup>c</sup>	1.29 <sup>bc</sup>	0.79 <sup>b</sup>	0.93 <sup>bc</sup>	1.00 <sup>bc</sup>	0.102	0.001
7 dpi <sup>4</sup>	0.00 <sup>a</sup>	1.79 <sup>c</sup>	1.00 <sup>bc</sup>	1.43 <sup>bc</sup>	1.14 <sup>bc</sup>	1.07 <sup>bc</sup>	0.107	0.001

540 <sup>1</sup>Values are the mean of six replicates per treatment; <sup>a-c</sup> Values in a row with different superscripts differ significantly ( $P < 0.05$ ).

541 <sup>2</sup>NCNT, non-challenged without any dietary treatment; CNT, challenged without any dietary treatment; THB, CNT with 3,4,5  
 542 trihydroxybenzoic acid at 0.1 g per kg; COM100, CNT with combination of THB and oregano extract at 0.1 g per kg; COM150, CNT with  
 543 combination of THB and oregano extract at 0.15 g per kg; COM200, CNT with combination of THB and oregano extract at 0.2 g per kg.

544 <sup>3</sup>Standard error of the mean.

545 <sup>4</sup>Days post-infection.

546

547 **Table 4.** Effect of dietary 3, 4, 5 trihydroxybenzoic acid and oregano supplementation on oocysts per gram in feces of coccidiosis challenged broiler  
 548 chickens<sup>1</sup>

Period	Dietary Treatment <sup>2</sup>						SEM <sup>3</sup>	P-value
	NCNT	CNT	THB	COM100	COM150	COM200		
Oocysts per gram count (Log <sub>10</sub> Oocysts)								
7 dpi <sup>4</sup>	0.00 <sup>a</sup>	4.57 <sup>b</sup>	4.15 <sup>b</sup>	3.85 <sup>b</sup>	3.92 <sup>b</sup>	3.53 <sup>b</sup>	0.384	0.001
8 dpi <sup>4</sup>	0.00 <sup>a</sup>	3.83 <sup>b</sup>	4.27 <sup>b</sup>	3.99 <sup>b</sup>	4.25 <sup>b</sup>	4.02 <sup>b</sup>	0.389	0.001
9 dpi <sup>4</sup>	0.00 <sup>a</sup>	3.30 <sup>b</sup>	3.15 <sup>b</sup>	3.80 <sup>b</sup>	3.73 <sup>b</sup>	3.71 <sup>b</sup>	0.350	0.001
10 dpi <sup>4</sup>	0.00 <sup>a</sup>	3.16 <sup>b</sup>	3.13 <sup>b</sup>	3.73 <sup>b</sup>	3.51 <sup>b</sup>	2.90 <sup>b</sup>	0.341	0.001
11 dpi <sup>4</sup>	0.00 <sup>a</sup>	3.02 <sup>b</sup>	2.38 <sup>ab</sup>	2.97 <sup>b</sup>	2.68 <sup>b</sup>	2.06 <sup>ab</sup>	0.308	0.014

549 <sup>1</sup>Values are the mean of six replicates per treatment; <sup>a-b</sup> Values in a row with different superscripts differ significantly (P < 0.05).

550 <sup>2</sup>NCNT, non-challenged without any dietary treatment; CNT, challenged without any dietary treatment; THB, CNT with 3,4,5  
 551 trihydroxybenzoic acid at 0.1 g per kg; COM100, CNT with combination of THB and oregano extract at 0.1 g per kg; COM150, CNT with  
 552 combination of THB and oregano extract at 0.15 g per kg; COM200, CNT with combination of THB and oregano extract at 0.2 g per kg.

553 <sup>3</sup>Standard error of the mean.

554 <sup>4</sup>Days post-infection.

555 **Table 5.** Effect of dietary 3, 4, 5 trihydroxybenzoic acid and oregano supplementation on intestinal morphology of coccidiosis challenged broiler  
 556 chickens<sup>1</sup>

Period	Dietary Treatment <sup>2</sup>						SEM <sup>3</sup>	P-value
	NCNT	CNT	THB	COM100	COM150	COM200		
Villus height (µm)								
4 dpi <sup>4</sup>	873.25	743.82	810.59	785.06	754.67	812.24	17.330	0.308
7 dpi <sup>4</sup>	877.45 <sup>b</sup>	427.76 <sup>a</sup>	577.46 <sup>a</sup>	581.74 <sup>a</sup>	508.52 <sup>a</sup>	540.85 <sup>a</sup>	33.207	0.001
Crypt depth (µm)								
4 dpi <sup>4</sup>	123.28	127.04	143.64	124.05	116.49	123.34	3.322	0.281
7 dpi <sup>4</sup>	89.21 <sup>a</sup>	263.91 <sup>b</sup>	208.07 <sup>b</sup>	249.08 <sup>b</sup>	254.70 <sup>b</sup>	237.39 <sup>b</sup>	13.300	0.001
Villus height : Crypt depth ratio (V : C)								
4 dpi <sup>4</sup>	7.38	6.07	5.83	6.53	6.65	6.92	0.210	0.322
7 dpi <sup>4</sup>	10.18 <sup>b</sup>	1.66 <sup>a</sup>	2.99 <sup>a</sup>	2.63 <sup>a</sup>	2.04 <sup>a</sup>	2.39 <sup>a</sup>	0.633	0.001

557 <sup>1</sup>Values are the mean of six replicates per treatment; <sup>a-b</sup> Values in a row with different superscripts differ significantly (P < 0.05).

558 <sup>2</sup>NCNT, non-challenged without any dietary treatment; CNT, challenged without any dietary treatment; THB, CNT with 3,4,5  
 559 trihydroxybenzoic acid at 0.1 g per kg; COM100, CNT with combination of THB and oregano extract at 0.1 g per kg; COM150, CNT with  
 560 combination of THB and oregano extract at 0.15 g per kg; COM200, CNT with combination of THB and oregano extract at 0.2 g per kg.

561 <sup>3</sup>Standard error of the mean.

562 <sup>4</sup>Days post-infection.

563 **Table 6.** Effect of dietary 3, 4, 5 trihydroxybenzoic acid and oregano supplementation on blood cytokine concentration of coccidiosis challenged  
 564 broiler chickens<sup>1</sup>

Period	Dietary Treatment <sup>2</sup>						SEM <sup>3</sup>	P-value
	NCNT	CNT	THB	COM100	COM150	COM200		
4 dpi <sup>4</sup>								
IL-1 $\beta$ (ng/mL)	1.67	8.58	8.47	7.49	7.55	8.27	1.225	0.588
IL-10 (ng/mL)	6.20	8.14	8.14	7.16	7.86	7.94	1.526	0.999
IFN- $\gamma$ (ng/mL)	2.21	4.44	4.02	3.61	3.86	3.93	0.552	0.914
TNF- $\alpha$ (pg/mL)	13.62	22.50	20.20	18.00	18.45	18.91	2.582	0.964
7 dpi <sup>4</sup>								
IL-1 $\beta$ (ng/mL)	6.21	11.65	9.46	10.73	9.88	10.65	1.306	0.899
IL-10 (ng/mL)	16.96	16.82	19.07	15.65	18.36	18.15	2.013	0.998
IFN- $\gamma$ (ng/mL)	1.96	4.42	3.82	3.76	4.21	4.44	0.599	0.867
TNF- $\alpha$ (pg/mL)	6.48	9.70	7.63	6.54	7.07	7.38	1.014	0.959

565 <sup>1</sup>Values are the mean of six replicates per treatment; <sup>a-b</sup> Values in a row with different superscripts differ significantly ( $P < 0.05$ ).

566 <sup>2</sup>NCNT, non-challenged without any dietary treatment; CNT, challenged without any dietary treatment; THB, CNT with 3,4,5  
 567 trihydroxybenzoic acid at 0.1 g per kg; COM100, CNT with combination of THB and oregano extract at 0.1 g per kg; COM150, CNT with  
 568 combination of THB and oregano extract at 0.15 g per kg; COM200, CNT with combination of THB and oregano extract at 0.2 g per kg; IL-1 $\beta$ ,  
 569 interleukin-1 beta; IL-10, interleukin-10; IFN- $\gamma$ , interferon-gamma; TNF- $\alpha$ , tumor necrosis factor-alpha

570 <sup>3</sup>standard error of the mean.

571 <sup>4</sup>Days post-infection.

572 **Table 7.** Effect of 3, 4, 5 trihydroxybenzoic acid and oregano supplementation on dressing percentage, relative breast meat weight and relative  
 573 drumstick weight of coccidiosis challenged broiler chickens.<sup>1</sup>

Period	Dietary Treatment <sup>2</sup>						SEM <sup>3</sup>	P-value
	NCNT	CNT	THB	COM100	COM150	COM200		
Dressing percentage <sup>4</sup> , %								
4 dpi <sup>7</sup>	88.69	88.24	88.12	88.32	88.45	88.72	0.113	0.594
7 dpi <sup>7</sup>	88.00	88.45	87.99	88.25	87.66	88.02	0.149	0.763
21 dpi <sup>7</sup>	92.26	92.65	91.87	91.02	92.49	92.17	0.251	0.484
Relative breast meat weight <sup>5</sup> , %								
4 dpi <sup>7</sup>	23.05	21.93	22.00	22.02	22.32	23.24	0.203	0.251
7 dpi <sup>7</sup>	23.55	22.57	24.31	23.96	24.39	23.45	0.199	0.069
21 dpi <sup>7</sup>	26.40	26.24	25.53	25.80	25.42	25.76	0.288	0.928
Relative drumstick weight <sup>6</sup> , %								
4 dpi <sup>7</sup>	9.97	9.68	9.71	10.01	9.74	9.92	0.067	0.592
7 dpi <sup>7</sup>	9.83	9.46	9.64	9.47	9.48	9.35	0.084	0.694
21 dpi <sup>7</sup>	9.55	9.26	9.97	10.07	9.94	10.12	0.100	0.077

574 <sup>1</sup>Values are the mean of six replicates per treatment; <sup>a-b</sup> Values in a row with different superscripts differ significantly (P < 0.05).

575 <sup>2</sup>NCNT, non-challenged without any dietary treatment; CNT, challenged without any dietary treatment; THB, CNT with 3,4,5  
 576 trihydroxybenzoic acid at 0.1 g per kg; COM100, CNT with combination of THB and oregano extract at 0.1 g per kg; COM150, CNT with  
 577 combination of THB and oregano extract at 0.15 g per kg; COM200, CNT with combination of THB and oregano extract at 0.2 g per kg

578 <sup>3</sup>Pooled standard error of the mean.

579 <sup>4</sup>Dressing percentage = [Carcass weight/Live body weight]×100%

580 <sup>5</sup>Relative breast meat weight = [Breast meat weight/Carcass weight]×100%

581 <sup>6</sup>Relative drumstick weight = [Drumstick weight/Carcass weight]×100%

582 <sup>7</sup>Days post-infection.