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Growth performance, serum biochemical parameters, serum corticosterone level and intestinal histomorphology in broiler chicken supplemented with *Kaempferia galanga* and *Curcuma longa*

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Supplementary Table 1. Ingredient composition of broiler pre-starter feed (%)

Ingredient	T_1	T_2	T_3	T_4
Maize	54.15	50.7	54.15	54.15
Soybean meal	39.30	40.00	39.30	39.30
Palm oil	3.25	3.50	3.25	3.25
Di-calcium phosphate	2.35	2.35	2.35	2.35
Calcite	0.50	0.50	0.50	0.50
Salt	0.45	0.45	0.45	0.45
K. galanga	0.00	2.50	0.00	0.00625
C. longa	0.00	0.00	0.19	0.000038
Trace mineral mixture[1]	0.10	0.10	0.10	0.10
Vitamin premix[2]	0.05	0.05	0.05	0.05
Lysine	1.30	1.30	1.30	1.30
Methionine	0.50	0.50	0.50	0.50
Choline	0.10	0.10	0.10	0.10
Toxin binder	0.10	0.10	0.10	0.10
Liver Powder	0.05	0.05	0.05	0.05
Coccidiostat	0.05	0.05	0.05	0.05
Calculated analytical values				
Metabolizable energy (Kcal/kg)	3001	3005	3001	3001
Crude Protein (%)	23.02	23.05	23.02	23.02
Calcium (%)	1.00	1.00	1.00	1.00
Available Phosphorus (%)	0.88	0.88	0.88	0.88

Supplementary Table 2. Ingredient composition of broiler starter feed (%)

Ingredient	T_1	T_2	T_3	T_4
Maize	55.00	51.90	55.00	55.00
Soybean meal	37.20	37.80	37.20	37.20
Palm oil	4.50	4.50	4.50	4.50
DCP	2.35	2.35	2.35	2.35
Calcite	0.50	0.50	0.50	0.50
Salt	0.45	0.45	0.45	0.45
K. galanga	0.00	2.50	0.00	0.00625
C. longa	0.00	0.00	0.19	0.000038
Trace mineral mixture[1]	0.10	0.10	0.10	0.10
Vitamin premix[2]	0.05	0.05	0.05	0.05
Lysine	1.20	1.20	1.20	1.20
Methionine	0.50	0.50	0.50	0.50
Choline	0.10	0.10	0.10	0.10
Toxin binder	0.10	0.10	0.10	0.10
Liver Powder	0.05	0.05	0.05	0.05
Coccidiostat	0.05	0.05	0.05	0.05
Calculated analytical values				
Metabolizable energy (Kcal/kg)	3100	3103	3100	3100
Crude Protein (%)	22.05	22.03	22.05	22.05
Calcium (%)	1.00	1.00	1.00	1.00
Available Phosphorus (%)	0.87	0.87	0.87	0.87

Supplementary Table 3. Ingredient composition of broiler finisher feed (%)

Ingredients	T_1	T_2	T_3	T_4
Maize	59.35	55.85	59.35	59.35
Soybean meal	32.50	33.10	32.50	32.50
Palm oil	4.85	5.25	4.85	4.85
DCP	2.35	2.35	2.35	2.35
Calcite	0.50	0.50	0.50	0.50
Salt	0.45	0.45	0.45	0.45
K. galanga	0.00	2.50	0.00	0.00625
C. longa	0.00	0.00	0.19	0.000038
Trace mineral mixture[1]	0.10	0.10	0.10	0.10
Vitamin premix[2]	0.05	0.05	0.05	0.05
Lysine	1.00	1.00	1.00	1.00
Methionine	0.45	0.45	0.45	0.45
Choline	0.10	0.10	0.10	0.10
Toxin binder	0.10	0.10	0.10	0.10
Liver Powder	0.05	0.05	0.05	0.05
Coccidiostat	0.05	0.05	0.05	0.05
Calculated analytical values				
Metabolizable energy (Kcal/kg)	3208	3207	3208	3208
Crude Protein (%)	20.05	20.02	20.05	20.05
Calcium (%)	1.00	1.00	1.00	1.00
Available Phosphorus(%)	0.85	0.85	0.85	0.85

Note: Each kilogram of the mineral mixture contains: Manganese, 100 g; Zinc, 85 g; Iron, 90 g; Copper, 15 g; Iodine, 1.8 g; Selenium, 0.45 g and organic chromium, 0.15 g. Each kilogram of vitamin premix supplement contains: Vitamin A, 82,500 IU; Vitamin D_3, 12000 IU; Vitamin B_2, 50 mg; Vitamin K, 10 mg; Vitamin B_1, 4.0 mg; Vitamin B_6, 8.0 mg; Vitamin B_{12}, 40 µg; Niacin, 60 mg; Calcium pantothenate, 40 mg; Vitamin E, 40 mg.

Supplementary Table 4. Mean weekly feed intake (g)

Week	T_1	T_2	T_3	T_4	P-value
Week 1	151.00 ±2.08	148.33 ±2.60	153.33 ±2.90	150.67 ±1.20	0.53^{ns}
Week 2	314.33 ±6.76	287.33 ±5.60	248.33 ±26.11	274.33 ± 6.74	0.06^{ns}
Week 3	633.67 ± 9.26^{a}	596.33 ± 3.28^{b}	606.33 ± 14.19^{ab}	498.00 ± 7.37^{c}	$<0.001^{**}$
Week 4	827.00 ± 8.73^{a}	794.33 ± 9.52^{b}	831.33 ± 8.41^{a}	760.00 ± 11.35^{c}	0.002^{**}
Week 5	1125.67 ± 13.86^{a}	997.67 ± 6.06^{b}	1008.33 ± 10.83^{b}	989.00 ± 10.59^{b}	$<0.001^{**}$
Week 6	1414.33 ± 10.52^{a}	1198.00 ± 15.39^{bc}	1247.00 ± 17.95^{b}	1168.33 ± 33.56^{c}	$<0.001^{**}$

**, Significant at 0.01 level; *, Significant at 0.05 level; ^{ns}, non-significant. Means having different small letters as superscripts differ significantly within a row.

Supplementary Table 5. Mean weekly cumulative feed intake (g)

Week	T_1	T_2	T_3	T_4	P-value
Week 1	151.00 ± 2.08	148.33 ± 2.60	153.33 ±2.90	150.66 ± 1.20	0.529^{ns}
Week 2	465.33 ± 6.22^{a}	435.66 ± 5.23^{ab}	401.66 ± 23.25^{b}	425.00 ± 6.92^{ab}	0.045^{*}
Week 3	1099.00 ± 6.24^{a}	1032.00 ± 8.14^{b}	1008.00 ± 29.95^{b}	923.00 ± 8.38^{c}	$<0.001^{**}$
Week 4	1926.00 ± 14.50^{a}	1826.33 ± 1.85^{b}	1839.33 ± 34.99^{b}	1683.00 ± 16.80^{c}	$<0.001^{**}$
Week 5	3051.66 ± 13.66^{a}	2824.00 ± 4.35^{b}	2847.66 ± 28.67^{b}	2672.00 ± 23.57^{c}	$<0.001^{**}$
Week 6	4466.00 ± 23.79^{a}	4022.00 ± 17.34^{b}	4094.66 ± 25.45^{b}	3982.66 ± 36.70^{c}	$<0.001^{**}$

**, Significant at 0.01 level; *, Significant at 0.05 level; ^{ns}, non-significant. Means having different small letters as superscripts differ significantly within a row.

Supplementary Table 6. Mean weekly cumulative FCR

Week	T_1	T_2	T_3	T_4	P-value
Week 1	1.50 ±0.03	1.41 ± 0.03	1.43 ± 0.09	1.38 ± 0.041	0.548^{ns}
Week 2	1.41 ± 0.04^{a}	1.31 ± 0.03^{ab}	1.20 ± 0.05^{b}	1.32 ± 0.014^{ab}	0.038^{*}
Week 3	1.66 ±0.20	1.42 ± 0.02	1.42 ± 0.01	1.25 ±0.023	0.123^{ns}
Week 4	1.75 ± 0.15	1.59 ± 0.04	1.60 ±0.03	1.49 ± 0.011	0.244^{ns}
Week 5	1.75 ± 0.02^{a}	1.60 ± 0.03^{b}	1.62 ± 0.01^{b}	1.56 ± 0.046^{b}	0.013^{*}
Week 6	1.98 ± 0.03^{a}	1.71 ± 0.03^{b}	1.81 ± 0.08^{b}	1.69 ± 0.04^{b}	0.017^{*}

**, Significant at 0.01 level; *, Significant at 0.05 level; ^{ns}, non-significant. Means having different small letters as superscripts differ significantly within a row.

Supplementary Table 7. Sensory evaluation of breast and thigh meat

Parameter	T_1	T_2	T_3	T_4	P-value
Appearance/Colour	7.17 ±0.31	7.33 ±0.21	7.67 ±0.21	7.33±0.21	0.715^{ns}
Flavour	7.33 ±0.21	7.33 ±0.33	7.50 ±0.22	7.17±0.31	0.984^{ns}
Texture	7.33 ±0.21	7.00 ±0.26	7.17 ±0.17	7.33±0.21	0.865^{ns}
Juiciness	7.17 ±0.31	7.17 ±0.31	7.33 ±0.42	7.17±0.31	0.995^{ns}
Tenderness	7.33 ±0.21	6.67 ±0.33	7.33 ±0.33	7.00±0.37	0.542^{ns}
Overall acceptability	7.17 ±0.31	7.00 ±0.37	7.50 ±0.22	7.33 ±0.33	0.911^{ns}

^{ns}, non-significant.

Supplementary Table 8. Serum biochemical parameters and corticosterone assay

Parameter	T_1	T_2	T_3	T_4	P-value
Total protein (g/dL)	3.45 ± 0.28^{a}	2.65 ± 0.20^{ab}	2.52 ± 0.31^{b}	3.20 ± 0.20^{ab}	0.096^{ns}
Albumin (g/dL)	1.53 ± 0.09	1.47 ± 0.03	1.55 ± 0.07	1.52 ± 0.06	0.882^{ns}
Cholesterol (g/dL)	148.66 ± 20.01^{a}	116.66 ± 11.31^{ab}	103.66 ± 9.17^{b}	99.33 ± 1.20^{b}	0.082^{ns}
Calcium (mg/dL)	9.00 ± 0.57	7.66 ± 0.66	6.66 ± 0.88	8.66 ± 0.88	0.207^{ns}
Phosphorus (mg/dL)	9.91 ± 0.33	14.05 ± 1.46	14.39 ± 2.64	12.95 ± 1.33	0.285^{ns}
Creatinine (mg/dL)	0.22 ± 0.02^{c}	0.31 ± 0.01^{bc}	0.35 ± 0.03^{ab}	0.45 ± 0.06^{a}	0.014^{*}
SGPT(U/L)	9.36 ± 0.85	11.28 ± 0.76	8.32 ± 1.63	9.77 ± 0.35	0.295^{ns}
SGOT (U/L)	151.92 ± 5.97	150.71 ± 11.68	166.95 ± 4.69	155.75 ± 22.81	0.820^{ns}
Corticosterone (ng/mL)	1.80 ± 0.04	1.75 ± 0.33	1.85 ± 0.04	1.75 ± 0.04	0.308^{ns}

******, Significant at 0.01 level; *****, Significant at 0.05 level; ^{ns}, non-significant.Means having different small letters as superscripts differ significantly within a row.