



Use of *Cucurma longa* and *Coriandrum sativum* powder as dietary supplements enhances growth performance, expression of growth-related nutritional genes and maintenance in broiler chickens

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Received: 11 September 2024; Accepted: 27 May 2025

Supplementary table 1. Ingredient and chemical composition (% DM basis) of basal diets of broiler chickens used during experiment

Ingredient	Pre-starter	Starter	Finisher
Maize	57.90	56.00	59.20
Soyabean meal	26.50	29.00	25.50
Groundnut cake	6.00	4.00	3.00
Meat cum bone meal	5.00	4.00	3.70
Vegetable oil	1.82	3.89	5.32
Limestone power	0.80	0.90	0.90
Dicalcium phosphate	0.70	0.85	1.00
Common salt	0.30	0.30	0.30
Trace mineral premix ¹	0.15	0.15	0.15
Vitamin Premix ²	0.10	0.10	0.10
L-lysine	0.25	0.15	0.050
DL-Methionine	0.12	0.10	0.130
Choline chloride	0.06	0.06	0.150
Toxin binder	0.10	0.10	0.10
Coccidiostat	0.05	0.05	0.05
Sodium bicarbonate	0.150	0.150	0.150
Total	100	100	100
<i>Chemical composition (% DM basis)</i>			
Crude protein (%)	23.09	22.13	20.21
Ether extract (%)	8.11	8.23	8.23
Crude fibre (%)	3.81	3.90	3.90
Total ash (%)	6.26	6.34	6.34
Calcium (%)	1.00	1.00	1.00
Total phosphorus (%)	0.71	0.73	0.73
Available phosphorus (%)	0.41	0.44	0.44
ME (kcal/kg) *	3012.96	3125.36	3219.87
Lysine (%) *	1.01	1.00	1.00
Methionine (%) *	0.45	0.44	0.44

*Calculated values, ¹Trace mineral premix supplied (per kg diets): Magnesium-300mg, Manganese-55mg, Iodine-0.4 mg, Iron-56 mg; Zinc-30mg and Copper-4mg., ²Vitamin premix supplied (per kg diet): vitamin A-8250IU, vitamin D3-1200ICU; vitamin k-1 mg; vitamin B1-2 mg, vitamin B2-4 mg; niacin-60 mg, pantothenic acid- 10 mg, cyanocobalamin-10 and choline: 500mg

Supplementary table 2: Details of primers used in the study

Target Gene	Product Size	Sequence (5'-3')	Gene Accession No	Annealing Temperature	Reference
Growth hormone receptor (GHR)	93 bp	For: AACACAGATACCCAACAGCC Rev: AGAAGTCAGTGTTCAGGG	NM_001001293	60°C	Ran <i>et al.</i> 2019
Insulin-like growth factor-1 (IGF-1)	91 bp	For: CACCTAAATCTGCACGCT Rev: CTTGTGGATGGCATGATCT	NM_001004384	60°C	Kirrella <i>et al.</i> 2021
β-Actin	160 bp	For: ACCTGAGCGCAAGTACTCTGTCT Rev: CATCGTACTCCTGCTTGCTGAT	NM_205518	60°C	Kirrella <i>et al.</i> 2021

Supplementary table 3. Effect of dietary supplementation of *Curcuma longa* and *Coriandrum sativum* powder on average weekly feed intake (g)/bird and overall, of broiler chicken

Week	T0	T1	T2	T3	SEM	p-value
1 st	173.33 ^a ± 0.96	187.99 ^b ± 1.64	194.44 ^{bc} ± 1.47	197.10 ^c ± 8.10	2.96	0.001
2 nd	238.33 ^a ± 1.50	256.41 ^b ± 1.97	263.33 ^c ± 2.31	269.16 ^c ± 2.20	3.59	0.001
3 rd	425.66 ^a ± 2.24	431.66 ^a ± 1.09	457.75 ^b ± 1.75	476.61 ^c ± 4.73	6.29	0.001
4 th	770.90 ^a ± 10.68	795.67 ^b ± 3.53	800.13 ^b ± 1.32	827.46 ^c ± 2.09	6.53	0.001
5 th	915.44 ^a ± 6.69	975.26 ^b ± 2.78	979.66 ^b ± 4.95	1001.00 ^c ± 4.85	9.81	0.001
1-5 th Week	2523.58 ^a ± 18.53	2647.00 ^b ± 2.32	2695.32 ^c ± 7.62	2771.34 ^d ± 14.32	27.65	0.001

^{abcd} Values with different superscripts in a row differ significantly ($p < 0.05$, $p < 0.01$)

Supplementary table 4. Effect of dietary supplementation of *Curcuma longa* and *Coriandrum sativum* powder on an average weekly body weight (g/bird) of broiler chicken

Week	T0	T1	T2	T3	SEM	p-value
1 st	167.50 ^a ± 1.25	171.13 ^{ab} ± 0.75	172.08 ^b ± 1.09	177.25 ^c ± 1.66	1.17	0.004
2 nd	392.83 ^a ± 1.60	398.88 ^{ab} ± 0.73	398.94 ^{ab} ± 2.41	401.77 ^c ± 2.15	1.25	0.047
3 rd	682.44 ^a ± 2.52	694.72 ^b ± 2.46	699.80 ^b ± 5.35	722.49 ^c ± 3.63	4.64	0.001
4 th	1113.12 ^a ± 2.41	1131.26 ^b ± 2.30	1137.12 ^b ± 4.34	1226.88 ^c ± 6.22	13.40	0.001
5 th	1600.01 ^a ± 3.02	1655.37 ^b ± 12.09	1676.05 ^b ± 2.75	1801.17 ^c ± 6.97	22.40	0.001

^{abc} Values with different superscripts in a row differ significantly ($p < 0.05$, $p < 0.01$)

Supplementary table 5. Effect of dietary supplementation of *Curcuma longa* and *Coriandrum sativum* powder on average weekly body weight gain (g/bird) and overall of broiler chicken

Week	T0	T1	T2	T3	SEM	p-value
1 st	119.44 ^a ± 1.08	122.26 ^{ab} ± 0.76	124.30 ^{bc} ± 1.40	128.37 ^c ± 1.93	1.14	0.010
2 nd	225.33 ± 1.63	227.75 ± 0.67	226.86 ± 1.98	224.52 ± 3.70	1.04	0.751
3 rd	289.61 ^a ± 2.12	295.83 ^a ± 1.92	300.85 ^a ± 5.37	320.72 ^b ± 3.02	3.80	0.001
4 th	430.68 ^a ± 2.94	436.54 ^a ± 0.77	437.32 ^a ± 9.58	504.38 ^b ± 3.61	9.39	0.001
5 th	486.89 ^a ± 2.77	524.11 ^b ± 10.91	538.93 ^b ± 1.72	574.29 ^c ± 5.34	9.82	0.001
1-5 th week	1551.97 ^a ± 3.03	1606.49 ^b ± 12.30	1628.28 ^b ± 2.53	1752.29 ^c ± 6.92	22.32	0.001

^{abc} Values with different superscripts in a row differ significantly ($p < 0.05$, $p < 0.01$)

Supplementary table 6. Effect of dietary supplementation of *Curcuma longa* and *Coriandrum sativum* powder on FCR at weekly interval and overall, of broiler chicken.

Week	T0	T1	T2	T3	SEM	p-value
1 st	1.44 ^a ±0.018	1.56 ^b ±0.017	1.56 ^b ±0.017	1.53 ^{ab} ±0.052	0.019	0.087
2 nd	1.04 ^a ±0.016	1.12 ^b ±0.012	1.15 ^{bc} ±0.018	1.19 ^c ±0.08	0.018	0.001
3 rd	1.46 ^{ab} ±0.012	1.45 ^a ±0.08	1.52 ^b ±0.020	1.48 ^{ab} ±0.021	0.010	0.092
4 th	1.78 ^b ±0.031	1.81 ^{bc} ±0.008	1.85 ^c ±0.023	1.63 ^a ±0.013	0.026	0.001
5 th	1.87 ^b ±0.018	1.85 ^b ±0.034	1.81 ^b ±0.012	1.73 ^a ±0.012	0.018	0.008
1-5 th week	1.62 ^b ±0.008	1.65 ^b ±0.012	1.64 ^b ±0.006	1.57 ^a ±0.008	0.009	0.002

^{abc}Values with different superscripts in a row differ significantly ($p < 0.05$, $p < 0.01$)

Supplementary table 7. Effect of dietary supplementation of *Curcuma longa* and *Coriandrum sativum* powder on performance index at weekly interval and overall, of broiler chicken.

Week	T0	T1	T2	T3	SEM	p-value
1 st	82.61 ±1.78	79.95 ±1.69	79.71 ±1.69	84.18 ±4.16	1.22	0.574
2 nd	213.94 ^c ±2.44	202.80 ^{bc} ±2.79	196.28 ^{ab} ±4.93	187.68 ^a ±4.46	3.31	0.007
3 rd	197.95 ^a ±2.84	203.58 ^{ab} ±2.54	198.10 ^a ±6.30	216.35 ^b ±4.97	2.94	0.059
4 th	241.70 ^a ±5.83	240.30 ^a ±1.54	235.69 ^a ±7.40	308.24 ^b ±4.67	9.31	0.001
5 th	259.51 ^a ±3.79	282.70 ^b ±11.13	297.23 ^b ±2.66	330.75 ^c ±5.08	8.27	0.001
1-5 th week	956.07 ^a ±3.32	971.83 ^{ab} ±13.01	988.87 ^b ±5.27	1111.46 ^c ±8.26	18.84	0.001

^{abc}Values with different superscripts in a row differ significantly ($p < 0.05$, $p < 0.01$)

Supplementary table 8: Effect of dietary supplementation of *Curcuma longa* and *Coriandrum sativum* powder on total tract nutrient retention (%retention).

Parameter	T0	T1	T2	T3	SEM	p-value
DM	70.61 ^a ±0.98	71.99 ^{ab} ±0.37	73.59 ^{bc} ±0.43	74.76 ^c ±1.06	0.57	0.025
CP	63.32 ^a ±0.91	63.52 ^a ±0.90	64.22 ^{ab} ±0.71	66.80 ^b ±0.53	0.54	0.05
EE	73.50 ^a ±0.40	75.00 ^b ±0.31	74.62 ^{ab} ±0.45	75.89 ^c ±0.41	0.31	0.018
Ca	16.62 ±0.17	16.58 ±0.20	16.94 ±0.04	17.02 ±0.02	0.08	0.120
P	10.52 ±0.30	10.89 ±0.13	10.99 ±0.10	10.90 ±0.13	0.96	0.356

^{abc}Values with different superscripts in a row differ significantly ($p < 0.05$, $p < 0.01$)