Table 3: Average live body weight and weight gain $(\overline{X} \pm SE)$g of White Pekin ducklings as affected by dietary energy levels, corn gluten feed and their interactions during the different experimental periods from 2 to 12 weeks of age.

Items		Body weight (g)			Weight gain (g)		
		2 week	**7 weeks**	**12 weeks**	**2-7 weeks**	**7-12weeks**	**2-12weeks**
Energy level, Kcal /Kg.		NS	**	*	**	NS	*
2800		210.22±0.84	1445.16±17.63^c	2227.29±12.97^b	1234.93±16.88^c	782.13±17.73	2017.07±13.30^{ab}
3000		210.19±0.73	1491.40±16.62^a	2267.40±5.00^a	1281.21±16.08^a	776.00±16.45	2057.21±15.15^a
3200		210.18±0.68	1477.93±18.35^b	2222.34±22.77^b	1267.76±17.73^b	744.41±26.61	2012.17±23.07^b
Corn gluten feed, %.		NS	**	*	*	NS	*
0		209.93±0.81	1470.89±19.72^b	2242.72±8.43^{ab}	1260.96±19.23^{ab}	771.83±19.06	2032.79±18.51^{ab}
8		210.23±0.71	1479.40±10.68^a	2262.48±12.27^a	1269.17±10.26^a	783.08±17.09	2052.24±12.61^a
16		210.42±0.71	1464.20±19.50^b	2211.83±21.91^b	1253.78±18.97^b	747.63±26.65	2001.41±22.20^b
Interactions effect.							
Energy level, Kcal /Kg.	*Corn gluten %.*	NS	*	*	*	NS	*
	0	210.23±1.68	1445.27±15.18^{bc}	2216.37±6.48^{ab}	1235.03±13.65^c	771.10±18.80	2006.13±16.72^{ab}
2800	8	210.20±1.65	1449.07±14.94^{bc}	2254.17±7.30^{ab}	1238.87±13.43^{bc}	805.10±21.54	2043.97±18.52^{ab}
	16	210.23±1.68	1441.13±15.16^c	2211.33±6.19^{ab}	1230.90±13.63^c	770.20±19.14	2001.10±16.64^{ab}
	0	209.90±1.69	1490.30±11.75^{ab}	2263.63±6.17^a	1280.40±10.08^{ab}	773.33±15.82	2053.73±17.02^a
3000	8	210.40±1.25	1506.10±15.86^a	2284.47±4.13^a	1295.70±14.61^a	778.37±18.66	2074.07±14.89^a
	16	210.27±1.35	1477.80±12.34^{abc}	2254.10±1.85^{ab}	1267.53±11.04^{abc}	776.30±12.93	2043.83±`2.79^{ab}
	0	209.67±1.45	1477.10±15.13^{abc}	2248.17±13.85^{ab}	1267.43±13.70^{abc}	771.07±19.46	2038.50±13.53^{ab}
3200	8	210.10±1.35	1483.03±16.95^{abc}	2248.80±5.24^{ab}	1272.93±15.63^{abc}	765.77±19.26	2038.70±16.00^{ab}
	16	210.77±1.17	1473.67±17.27^{abc}	2170.07±6.86^b	1262.90±16.10^{abc}	696.40±27.52	1959.30±13.83^b

Means having different letters at the same column are significantly (P<0.05) different. * = (P<0.05); ** = (P<0.01); NS= Not significant.

Table 4: Average feed intake and feed conversion $(\overline{X} \pm SE)$ of White Pekin ducklings as affected by dietary energy levels, corn gluten feed and their interactions during the different experimental periods from 2 to 12 weeks of age.

Items		Feed intake (g)			Feed conversion (g feed/g gain)		
		2-7 weeks	7-12weeks	2-12weeks	2-7 weeks	7-12weeks	2-12weeks
Energy level, Kcal /Kg.		**	**	**	**	NS	**
2800		3814.7 ± 21.1^a	4881.7 ± 31.5^a	8696.4 ± 50.0^a	3.09 ± 0.03^a	6.26 ± 0.09	4.31 ± 0.02^a
3000		3675.3 ± 10.1^b	4703.1 ± 14.5^b	8378.4 ± 18.6^b	2.87 ± 0.01^b	6.06 ± 0.06	4.07 ± 0.02^c
3200		3705.0 ± 20.6^b	4714.2 ± 13.2^b	8419.2 ± 33.5^b	2.92 ± 0.02^b	6.42 ± 0.30	4.19 ± 0.06^b
Corn gluten feed, %.		NS	NS	NS	NS	NS	*
0		3728.2 ± 33.4	4754.6 ± 29.8	8482.8 ± 61.4	2.96 ± 0.04	6.17 ± 0.08	4.17 ± 0.04^b
8		3724.7 ± 25.1	4764.3 ± 44.7	8489.0 ± 69.1	2.94 ± 0.04	6.10 ± 0.09	4.14 ± 0.03^b
16		3742.2 ± 23.7	4780.2 ± 30.8	8522.4 ± 53.0	2.99 ± 0.04	6.47 ± 0.29	4.26 ± 0.06^a
Interactions effect.							
Energy level, Kcal/Kg	**Corn gluten Feed, %.**	**	**	**	**	NS	**
	0	3831.3 ± 21.4^a	4850.9 ± 36.4^{ab}	8682.2 ± 57.8^a	3.10 ± 0.05^a	6.30 ± 0.11	4.33 ± 0.01^a
2800	8	3800.7 ± 52.4^{abc}	4908.0 ± 90.3^a	8708.7 ± 39.8^a	3.07 ± 0.07^a	6.13 ± 0.26	4.26 ± 0.02^{ab}
	16	3812.2 ± 43.6^{ab}	4886.2 ± 39.8^a	8698.4 ± 83.4^a	3.10 ± 0.07^a	6.35 ± 0.11	4.35 ± 0.03^a
	0	3650.0 ± 17.1^d	4702.4 ± 28.6^c	8352.3 ± 27.1^b	2.85 ± 0.02^b	6.09 ± 0.16	4.07 ± 0.03^c
3000	8	3682.4 ± 16.9^d	4685.1 ± 11.5^c	8367.5 ± 28.4^b	2.84 ± 0.01^b	6.02 ± 0.08	4.03 ± 0.02^c
	16	3693.5 ± 11.3^{dc}	4721.9 ± 35.3^c	8415.4 ± 39.2^b	2.91 ± 0.02^b	6.09 ± 0.13	4.12 ± 0.02^{bc}
	0	3703.2 ± 62.6^{bcd}	4710.6 ± 39.4^c	8413.8 ± 101.9^b	2.92 ± 0.03^b	6.12 ± 0.18	4.13 ± 0.05^{bc}
3200	8	3691.0 ± 12.5^{dc}	4699.7 ± 11.9^c	8390.7 ± 23.6^b	2.90 ± 0.03^b	6.15 ± 0.16	4.12 ± 0.02^{bc}
	16	3720.8 ± 28.6^{abcd}	4732.4 ± 10.9^{bc}	8453.2 ± 39.4^b	2.95 ± 0.03^b	6.99 ± 0.86	4.32 ± 0.15^a

Means having different letters at the same column are significantly (P<0.05) different. * = (P<0.05); ** = (P<0.01); NS= Not significant.

Table 5: Carcass traits values $(\bar{X} \pm SE)$ of White Pekin ducklings as affected by dietary energy levels, corn gluten feed and their interactions at 12 weeks of age.

Items		Pre-slaughter weight, g.	Carcass traits (g/100 g body weight)						
			Liver	Heart	Gizzard	Giblets	Abdominal fat	Carcass.	Dressing.
Energy level, Kcal /Kg.		NS	*	*	NS	*	*	NS	NS
2800		2214.2±10.8	1.82±0.04[b]	0.44±0.02[b]	3.42±0.04	5.68±0.07[c]	1.30±0.03[b]	61.70±0.70	67.38±0.69
3000		2233.0±11.6	1.86±0.05[b]	0.48±0.02[ab]	3.48±0.04	5.82±0.09[b]	1.33±0.04[ab]	62.01±0.85	67.83±0.88
3200		2226.4±7.1	1.94±0.05[a]	0.49±0.02[a]	3.53±0.03	5.96±0.09[a]	1.40±0.04[a]	62.57±0.89	68.54±0.90
Corn gluten feed, %.		NS	*	*	NS	NS	NS	*	*
0		2225.0±10.7	2.04±0.03[a]	0.54±0.02[a]	3.53±0.05	6.11±0.08	1.34±0.05	62.63±0.78[a]	68.74±0.77[a]
8		2225.4±12.0	1.81±0.02[b]	0.45±0.01[b]	3.43±0.02	5.69±0.04	1.31±0.04	62.36±0.74[ab]	68.06±0.75[ab]
16		2224.3±8.1	1.77±0.02[b]	0.42±0.01[b]	3.46±0.03	5.65±0.05	1.37±0.03	61.29±0.88[b]	66.95±0.89[b]
Interactions effect.									
Energy level, Kcal/Kg	Corn gluten Feed, %.	NS	*	*	NS	*	NS	NS	NS
2800	0	2220.3±16.6	1.95±0.02[b]	0.48±0.04[b]	3.43±0.12	5.86±0.15[b]	1.30±0.08	62.41±1.16	68.27±1.01
	8	2215.9±29.2	1.78±0.03[cd]	0.43±0.02[b]	3.41±0.02	5.62±0.03[bc]	1.26±0.06	61.91±1.52	67.53±1.52
	16	2208.5±14.5	1.73±0.02[d]	0.40±0.01[b]	3.43±0.07	5.56±0.10[c]	1.33±0.02	60.78±1.25	66.34±1.19
3000	0	2224.3±30.4	2.05±0.03[a]	0.56±0.03[a]	3.55±0.06	6.16±0.06[a]	1.34±0.10	62.53±1.67	68.69±1.65
	8	2243.4±23.1	1.79±0.04[cd]	0.45±0.01[b]	3.43±0.08	5.67±0.11[bc]	1.29±0.08	62.35±1.65	68.02±1.70
	16	2231.2±7.6	1.75±0.01[d]	0.42±0.01[b]	3.45±0.07	5.62±0.06[bc]	1.36±0.06	61.16±1.62	66.78±1.63
3200	0	2228.8±10.8	2.13±0.05[a]	0.57±0.03[a]	3.62±0.04	6.32±0.03[a]	1.37±0.09	62.95±1.76	69.27±1.75
	8	2217.0±9.8	1.87±0.05[bc]	0.46±0.02[b]	3.46±0.03	5.79±0.01[cb]	1.39±0.06	62.83±1.13	68.62±1.12
	16	2233.3±18.1	1.83±0.03[cd]	0.45±0.02[b]	3.50±0.03	5.78±0.02[bc]	1.43±0.08	61.94±2.19	67.72±2.20

Means having different letters at the same column are significantly (P<0.05) different. * = (P<0.05); NS= Not significant.

Table 6: Some blood serum constituents $(\bar{X} \pm SE)$ of White Pekin ducklings as affected by dietary energy levels, corn gluten feed and their interactions at 12 weeks of age.

Items		Triglycerides Mg/dl	Cholesterol Mg/dl	AST U/L	ALT U/L	Total protein g/dl	Albumin g/dl	Globulin g/dl
Energy level, Kcal /Kg.		NS	*	*	NS	*	NS	NS
2800		158.71±1.26	160.14±1.54^c	30.79±0.66^b	25.26±0.38	5.52±0.03^b	3.54±0.26	2.36±0.13
3000		161.78±2.06	163.79±1.10^b	31.29±0.36^{ab}	25.42±0.30	5.57±0.04^b	3.56±0.23	2.01±0.25
3200		162.99±1.86	166.22±1.19^a	32.11±0.38^a	25.40±0.39	5.63±0.04^a	3.34±0.03	2.29±0.02
Corn gluten feed, %.		*	**	*	NS	*	NS	NS
0		164.84±0.60^a	167.50±0.84^a	30.13±0.31^c	25.10±0.41	5.65±0.03^a	3.36±0.02	2.29±0.01
8		159.21±0.83^b	163.47±0.99^b	32.87±0.30^a	25.86±0.34	5.57±0.03^b	3.32±0.03	2.25±0.01
16		159.44±2.63^b	159.17±1.14^c	31.19±0.39^b	25.09±0.25	5.51±0.04^c	3.75±0.33	2.13±0.30
Interactions effect.								
Energy level, Kcal/Kg.	**Corn gluten Feed, %.**	*	*	*	*	*	NS	*
	0	166.19±0.72^a	170.19±0.16^a	29.05±0.23^d	24.23±0.51^b	5.57±0.03^{ab}	3.31±0.01	2.26±0.04^{ab}
2800	8	160.29±1.19^{ab}	166.15±0.61^b	33.12±0.73^a	26.42±0.10^a	5.52±0.04^b	3.29±0.05	2.23±0.01^{ab}
	16	162.49±5.55^{ab}	162.31±0.98^{de}	30.21±0.52^{cd}	25.13±0.52^{ab}	5.48±0.07^b	4.02±0.80	2.60±0.40^a
	0	165.21±0.94^{ab}	167.15±0.88^b	30.34±0.37^{cd}	25.33±0.38^{ab}	5.66±0.03^{ab}	3.35±0.04	2.31±0.01^{ab}
3000	8	160.12±0.86^{ab}	164.19±0.60^{cd}	32.38±0.32^{ab}	26.12±0.51^{ab}	5.55±0.05^b	3.31±0.06	2.24±0.01^{ab}
	16	160.02±6.36^{ab}	160.02±0.67^e	31.16±0.52^{bc}	24.82±0.46^{ab}	5.50±0.09^b	4.01±0.67	1.49±0.75^b
	0	163.11±0.68^{ab}	165.15±1.07^{bc}	31.01±0.05^{bc}	26.05±1.16^{ab}	5.73±0.02^a	3.43±0.03	2.30±0.02^{ab}
3200	8	157.21±1.80^{ab}	160.07±1.17^e	33.11±0.54^a	25.03±0.74^{ab}	5.63±0.05^{ab}	3.36±0.03	2.27±0.03^{ab}
	16	155.82±0.64^b	155.19±1.00^f	32.21±0.57^{ab}	25.33±0.42^{ab}	5.54±0.07^b	3.24±0.04	2.30±0.06^{ab}

Means having different letters at the same column are significantly (P<0.05) different. * = (P<0.05); NS= Not significant.

Table 7: Economic efficiency of White Pekin ducklings as affected by dietary energy levels, corn gluten feed and their interactions at 12 weeks of age.

Items	Body weight (Kg)	Price of 1Kg body weight /(LE)	Total revenue bird (LE)	Feed intake/ bird (Kg) in starter period	Price/Kg feed (LE) in starter period	Feed intake/ bird (Kg) In finisher period	Price/Kg feed (LE) in finisher period	Total feed cost/ bird (LE)	Fixed/ bird price (LE)	Total cost bird (LE)	Net revenue/ bird (LE)	Economic efficiency (EEf)%
Energy level, Kcal/Kg.												
2800	2.227	12.0	26.724	3.815	1.704	4.882	1.676	14.683	8.0	22.683	4.041	17.82
3000	2.267	12.0	27.204	3.675	1.789	4.703	1.755	14.828	8.0	22.828	4.376	19.17
3200	2.222	12.0	26.664	3.705	1.871	4.714	1.833	15.573	8.0	23.573	3.091	13.11
Corn gluten feed, %.												
0	2.243	12.0	26.916	3.728	1.767	4.755	1.736	14.842	8.0	22.842	4.074	17.84
8	2.262	12.0	27.144	3.725	1.782	4.764	1.748	14.965	8.0	22.965	4.179	18.20
16	2.212	12.0	26.544	3.742	1.814	4.780	1.779	15.292	8.0	23.292	3.252	13.96
Interactions effect.												

Energy level Kcal/Kg.	Corn gluten Feed, %.	Body weight (Kg)	Price of 1Kg body weight /(LE)	Total revenue bird (LE)	Feed intake/ bird (Kg) in starter period	Price/Kg feed (LE) in starter period	Feed intake/ bird (Kg) In finisher period	Price/Kg feed (LE) in finisher period	Total feed cost/ bird (LE)	Fixed/ bird price (LE)	Total cost bird (LE)	Net revenue/ bird (LE)	Economic efficiency (EEf)%
	0	2.216	12.0	26.592	3.831	1.686	4.851	1.655	14.487	8.0	22.487	4.105	18.25
2800	8	2.254	12.0	27.048	3.801	1.699	4.908	1.673	14.669	8.0	22.669	4.379	19.32
	16	2.211	12.0	26.532	3.812	1.725	4.886	1.699	14.877	8.0	22.877	3.655	15.97
	0	2.264	12.0	27.168	3.650	1.769	4.702	1.742	14.648	8.0	22.648	4.520	19.96
3000	8	2.284	12.0	27.408	3.682	1.780	4.685	1.744	14.725	8.0	22.725	4.683	20.61
	16	2.254	12.0	27.048	3.694	1.817	4.722	1.779	15.112	8.0	23.112	3.936	17.03
	0	2.248	12.0	26.976	3.703	1.847	4.711	1.812	15.376	8.0	23.376	3.600	15.40
3200	8	2.249	12.0	26.988	3.691	1.867	4.700	1.828	15.483	8.0	23.483	3.505	14.93
	16	2.170	12.0	26.040	3.721	1.900	4.732	1.860	15.871	8.0	23.871	2.169	9.09

Fixed/ bird price (LE) = Price of bird at 2 weeks of age (7 LE) + Vet. cost /bird (0.5 LE) + Rearing cost /bird (0.5 LE)

Net revenue/ bird (LE) = Total revenue bird (LE) - Total cost bird (LE).   EEf = Net revenue/ bird (LE)/ Total cost bird (LE) X100.