

Table 2. Rabbit's performance values as affected by the experimental diets.

Items	Control Diet	Level of Papaya Leaf extract in diets			Level of Papaya Leaf in diets			SEM	Sig
		1%	2%	3%	1%	2%	3%		
Initial body weight(g)	530.17	575.25	570.25	576.33	572.41	574.00	567.50	22.64	NS
Final body weight (g)	1836.50 ^{ab}	2026.33 ^a	2076.33 ^a	2047.42 ^a	1644.42 ^b	1945.00 ^a	1861.83 ^{ab}	76.28	**
Daily weight gain (g)									
5-13 weeks of age	17.85 ^c	21.01 ^{ab}	21.84 ^a	20.48 ^{ab}	17.02 ^c	18.91 ^{bc}	17.85 ^c	0.78	**
Daily feed intake(g)									
5-13 weeks of age	71.08 ^{cd}	76.57 ^b	82.18 ^a	76.32 ^{bc}	68.14 ^d	74.12 ^{bc}	71.06 ^{cd}	1.90	*
Feed conversion ratio									
5-13 weeks of age	3.98 ^a	3.34 ^b	3.76 ^b	3.73 ^b	4.00 ^a	3.92 ^a	3.98 ^a	0.26	**
Relative growth rate (%)	99.37 ^b	101.52 ^{ab}	105.71 ^a	104.86 ^a	97.32 ^b	100.29 ^b	98.84 ^b	4.20	**
Performance index (%)	50.83 ^b	52.66 ^{ab}	55.75 ^a	55.23 ^a	47.00 ^b	52.55 ^{ab}	48.13 ^b	3.85	**

a, b, c, Means are bearing different superscripts in the same row, differed significantly ($P \leq 0.05$)

SE = Standard error. * $P \leq 0.05$, ** $P < 0.01$, NS: Not significant.

Table 3. Digestibility coefficients of nutrients as affected by experimental treatments.

Items	Control Diet	Level of Papaya Leaf extract in diets			Level of Papaya Leaf in diets			SEM	Sig.
		1%	2%	3%	1%	2%	3%		
		DM	69.40	69.40	69.22	69.37	69.20		
OM	65.37 ^d	67.48 ^b	68.68 ^a	68.18 ^a	66.41 ^c	65.57 ^d	65.75 ^d	0.17	**
CP	74.9 ^d	75.80 ^c	76.60 ^b	77.43 ^a	75.45 ^c	75.41 ^c	74.89 ^d	0.16	**
CF	30.67 ^d	33.28 ^c	35.40 ^b	37.43 ^a	31.11 ^d	31.22 ^d	33.23 ^c	0.48	**
EE	73.65	73.63	73.67	73.45	73.80	73.66	73.33	0.55	NS
NFE	75.89 ^{cd}	76.43 ^c	77.48 ^b	78.28 ^a	76.31 ^{cd}	75.90 ^{cd}	75.75 ^d	0.19	**
DCP	12.94 ^{cd}	13.03 ^c	13.17 ^b	13.31 ^a	12.97 ^{cd}	12.96 ^{cd}	12.87 ^d	0.04	**
TDN	63.56 ^d	64.81 ^c	65.52 ^b	66.39 ^a	63.60 ^d	63.53 ^d	63.82 ^d	0.17	**
*DE kcal/kg	2815.86 ^d	2871.08 ^c	2902.54 ^b	2940.93 ^a	2817.63 ^d	2814.23 ^d	2827.37 ^d	7.68	**

a, b, c, Means are bearing different superscripts in the same row, differed significantly ($P < 0.05$)

** $P < 0.01$ NS: Not significant. *DE = TDN X 44.3 (Schneider and Flatt, 1975).

Table 4. Carcass dressing , edible goblots and Caecum percentages of growing rabbits fed on experimental diets.

Items	Control Diet	Level of Papaya Leaf extract in diets			Level of Papaya Leaf in diets			SEM	Sig.
		1%	2%	3%	1%	2%	3%		
Carcass %	54.62	53.81	54.62	54.77	54.25	55.37	54.99	1.35	NS
Edible goblots,%	7.07	7.26	7.14	6.60	6.59	6.66	7.25	0.06	NS
Liver, %	5.32	5.42	5.20	4.82	5.02	5.01	5.62	0.45	NS
Heart, %	0.56	0.70	0.66	0.65	0.51	0.53	0.57	0.07	NS
Kidneys,%	1.13	1.13	1.28	1.12	1.06	1.11	1.07	0.08	NS
Lungs,%	1.21	1.45	1.09	1.35	0.97	1.25	1.25	0.23	NS
Caecum,%	5.23	5.21	5.30	5.12	5.16	5.77	5.38	0.163	NS
Dressing, %	58.47	57.70	58.59	58.37	57.82	59.0	58.98	1.29	NS

NS: Not significant.

Dressing wt. = Empty carcass wt. (without head) + Edible goblots wt.; Edible goblots wt. = Liver wt. + Kidney wt. + Heart wt. ; Total edible parts % = Total edible parts wt. / fasted wt. *100.

Table 5 Meat quality (chemical composition) of growing rabbits fed on experimental diets.

Items	Control Diet	Level of Papaya Leaf extract in diets			Level of Papaya Leaf in diets			SEM	Sig.
		1%	2%	3%	1%	2%	3%		
Moisture	73.09	72.99	72.73	72.21	72.41	72.05	72.05	0.35	NS
Ash%	1.41	1.22	1.28	1.22	1.43	1.59	1.60	0.13	NS
CP%	23.7 ^c	23.92 ^{bc}	24.41 ^{bc}	24.76 ^a	24.44 ^{abc}	24.59 ^{ab}	24.55 ^{ab}	0.22	**
EE%	1.73	1.87	1.58	1.81	1.72	1.78	1.80	0.17	NS

a, b, c, Means are bearing different superscripts in the same row , differed significantly (P <0.05)

** P<0.01, NS: Not significant.

Table 6. Blood parameters of growing rabbits fed on experimental diets.

Items	Control Diet	Level of Papaya Leaf extract in diets			Level of Papaya Leaf in diets			SE M	Sig.
		1%	2%	3%	1%	2%	3%		
Total protein (g/dl)	4.72 ^c	6.11 ^{ab}	6.72 ^a	6.83 ^a	5.45 ^b	5.71 ^{ab}	5.82 ^{ab}	0.13	**
Albumin(g/dl)	2.01 ^c	2.99 ^a	2.79 ^a	2.91 ^a	2.51 ^b	2.73 ^a	2.39 ^b	0.11	**
Globulin (g/dl)	2.71 ^c	3.12 ^{ab}	3.93 ^a	3.92 ^a	2.94 ^b	2.98 ^b	3.43 ^a	0.02	**
AST(u/l)	35.54	35.52	33.25	34.54	32.62	33.55	33.65	0.38	NS
ALT (u/l)	27.65	24.75	24.32	23.65	25.35	26.43	27.21	0.45	NS
CHOL (mmol/l)	89.65 ^a	67.45 ^c	68.25 ^c	66.52 ^c	78.36 ^b	77.65 ^b	76.25 ^b	1.32	**
HDL (mmol/l)	25.36 ^b	41.63 ^a	43.65 ^a	44.09 ^a	49.54 ^a	45.36 ^a	47.75 ^a	0.65	**
LDL (mmol/l)	64.29 ^a	25.82 ^b	24.60 ^b	22.43 ^b	28.82 ^b	32.29 ^b	28.50 ^b	0.23	**
T. lipids (mg/dl)	435.52 ^a	369.54 ^b	368.36 ^b	362.35 ^b	375.46 ^b	373.65 ^b	372.34 ^b	8.65	**
IgG (mg/ml)	3.15 ^b	6.52 ^a	6.83 ^a	6.82 ^a	5.85 ^a	6.45 ^a	6.12 ^a	0.06	**
IgM (mg/ml)	2.45 ^b	3.74 ^a	3.65 ^a	3.85 ^a	3.21 ^a	3.56 ^a	3.46 ^a	0.04	**

a, b, c, Means are bearing different superscripts in the same row, differed significantly ($P < 0.05$)
 ** $P < 0.01$, NS: Not significant.

Table 7 Plasma antioxidant enzyme statuses of growing rabbits fed on experimental diets.

Items	Control Diet	Level of Papaya Leaf extract in diets			Level of Papaya Leaf in diets			SEM	Sig.
		1%	2%	3%	1%	2%	3%		
GPx ($\mu\text{g/g}$)	49.51 ^c	71.24 ^a	73.62 ^a	75.43 ^a	63.33 ^b	67.54 ^{ab}	68.45 ^{ab}	0.21	*
SOD (%)	51.21 ^c	74.36 ^a	78.54 ^a	79.24 ^a	65.51 ^b	66.52 ^b	69.35 ^b	0.52	**
CAT (mM/ml/min)	5.38 ^c	10.62 ^a	11.81 ^a	12.32 ^a	8.5 ^b	8.72 ^b	9.54 ^b	0.06	*

a, b, c, Means are bearing different superscripts in the same row, differed significantly ($P < 0.05$)

* $P \leq 0.05$, ** $P < 0.01$,

Table 8. Caecum contents of growing rabbits fed on experimental diets.

Items	Control Diet	Level of Papaya Leaf extract in diets			Level of Papaya Leaf in diets			SEM	Sig.
		1%	2%	3%	1%	2%	3%		
Caecum pH	6.00 ^b	6.10 ^{ab}	6.07 ^{ab}	6.43 ^{ab}	6.77 ^a	6.13 ^{ab}	5.80 ^b	0.22	**
*TVFA (mg/100ml)	3.72 ^e	5.11 ^b	5.25 ^{ab}	5.49 ^a	4.56 ^c	4.23 ^d	4.26 ^{cd}	0.10	**
Ammonia (mg/100ml)	9.84 ^a	8.48 ^b	8.49 ^b	8.17 ^d	8.56 ^b	8.26 ^{cd}	8.42 ^{bc}	0.06	**

a, b, c, d Means are bearing different superscripts in the same row, differed significantly ($P < 0.05$)

** $P < 0.01$, NS: Not significant. TVFA: Total Volatile Fatty Acids.

Table 9. Microbial Cecum ($\times 10^8$ CFU/ml) as affected by the experimental diets.

Cecum microbes (CFU/ml) ¹	Control Diet	Level of Papaya Leaf extract in diets			Level of Papaya Leaf in diets			SEM	Sig.
		1%	2%	3%	1%	2%	3%		
Aerobic total count	7.40 ^a	5.59 ^b	5.15 ^b	5.30 ^b	5.44 ^b	5.57 ^b	5.22 ^b	0.15	**
Fecal coliforms	6.19 ^a	4.27 ^{cd}	4.21 ^d	4.23 ^d	4.24 ^d	4.55 ^{bc}	4.71 ^b	0.10	**
E.coli	5.26 ^a	3.05 ^b	2.99 ^b	2.93 ^b	3.11 ^b	3.13 ^b	3.03 ^b	0.08	**
Bacillus cereus	4.32 ^a	3.66 ^b	3.38 ^b	3.29 ^b	3.47 ^b	3.62 ^b	3.52 ^b	0.18	**
Enterobacter	5.76 ^a	3.26 ^c	3.78 ^b	3.37 ^{bc}	3.30 ^{bc}	3.68 ^{bc}	3.55 ^{bc}	0.14	**
Clostridium sp	2.26 ^a	1.48 ^{bc}	1.21 ^c	1.24 ^c	1.49 ^{bc}	1.47 ^{bc}	1.76 ^b	0.12	**
Enterococcus	3.18 ^a	2.67 ^b	2.48 ^{bc}	2.26 ^c	2.47 ^{bc}	2.47 ^{bc}	2.51 ^{bc}	0.12	**
Yeasts	5.19 ^b	6.21 ^a	6.25 ^a	6.39 ^a	6.34 ^a	6.31 ^a	6.33 ^a	0.07	**
Salmonella & Shigella	ND	ND	ND	ND	ND	ND	ND	=	=

Each value is an average of 3 observations. LSD between treatments d.f (0.05).

ND =Not detected, Number of bacterial cells per gram of cecum content (log₁₀-1 CFU/ml)

¹CFU (Colony forming unite).

Table 10. Economic efficiency of using the experimental diets.

Items	Control diet	Level of Papaya Leaf extract in diets			Level of Papaya Leaf in diets		
		1%	2%	3%	1%	2%	3%
Total weight gain (kg)	1.070	1.260	1.310	1.228	1.096	1.134	1.070
Price of 1kg body weight	45	45	45	45	45	45	45
Selling price/rabbit (LE) (A)	48.15	56.70	58.95	55.26	49.32	51.03	48.15
Total feed intake	4.33	4.63	4.93	4.58	4.12	4.46	4.26
Price/kg diets (LE)	4.17	4.20	4.21	4.22	4.18	4.19	4.19
Total feed cost/rabbit (LE)(B)	18.06	19.45	20.76	19.33	17.22	18.69	17.85
Net revenue(LE)¹	30.09	37.25	38.19	35.93	32.10	32.34	30.3
Economic efficiency²	1.67	1.92	1.84	1.86	1.86	1.73	1.70
Relative Econ. Eff.³	100	115	110.18	111.38	111.38	103.59	101.02

(1) Net revenue = A – B.

(2) Economic efficiency = (A-B/B x 100).

(3) Relative Economic Efficiency= Economic efficiency of treatments other than the control/ Economic efficiency of the control group.