

Table 2 : Effect of dietary supplementation with some medicinal and aromatic plants on growth performance, economical efficiency and viability (%) of growing NZW rabbits.

Item %	Experimental diets					Significance
	C	P1	P2	P3	P4	
No of rabbits	8	8	8	8	8	-
Body weight (g) at:						
6 weeks	854.87±8.5	870±3.02	861±3.06	847±4.04	850±4.9	NS
13 weeks	1938±9 ^d	1958±9.7 ^c	2046±9.8 ^b	2125±10 ^a	1602±10.1 ^c	**
Total weight gain (g)	1083.5±15.62 ^c	1088±7.27 ^c	1185±8.96 ^b	1278±9.63 ^a	752±6.68 ^d	**
Daily weight gain (g)	22.11±1.23 ^c	22.20±0.64 ^c	24.18±0.28 ^b	26.07±0.37 ^a	15.35±0.95 ^d	**
Daily feed consumption (g)	80.03±2.4 ^b	82.37±3.9 ^b	83.96±4.4 ^{ab}	88.91±3.9 ^a	73.22±4.33 ^c	**
Feed conversion	3.66±0.03 ^b	3.72±0.03 ^b	3.42±0.04 ^c	3.35±0.03 ^c	4.74±0.04 ^a	**
PI (%)	52.87 ±0. 63 ^c	52.45±0.61 ^c	59.92±0.62 ^b	63.46±0.53 ^a	33.74±0.21 ^d	**
Viability %	100	75	87.5	100	62.5	-
Total feed cost (L.E.)¹	11.01	11.73	12.04	12.39	10.49	-
Feed cost/Kg gain (L.E.)	10.166	12.762	10.164	9.695	13.950	-
Economical efficiency (%)²	136.08	122.61	136.14	151.79	72.05	-
Relative economical efficiency	100	90.105	100.1	134.35	52.947	-

^{a, b, c, d} Means in the same row bearing different letters, differ significantly (P< 0.05).

Experimental diets P1, P2, P3 and P4 supplemented with 1% Basil, chamomile, fennel and ginger, respectively.

¹ Total feed cost (L.E.) = feed price / kg (L.E.) x total feed intake (Kg).

² Economical efficiency based on that the price of 100 kilogram of diet C, P1, P2, P3 and P4 was 274.5, 290.5, 295.5, 284.5 and 292.5 Egyptian pound (L.E.) respectively and the price of one kilogram of live body weight at selling time was 24 L.E.

NS = not significant * P< 0.05

** P < 0.01

Table 3 : Effect of dietary supplementation with some medicinal and aromatic plants on coefficients of nutrients, nutritive values and nitrogen utilization of growing NZW rabbits.

Item	Experimental diets					Significance
	C	P1	P2	P3	P3	
<u>Nutrients appearance digestibility coefficients :</u>						
Dry matter (DM)	68.64±0.85 ^b	68.46±0.55 ^b	70.45±0.38 ^a	71.89±1.25 ^a	64.95 ±0.29 ^c	**
Organic matter (OM)	68.74±0.84 ^{ab}	68.49±0.90 ^b	71.11±0.68 ^{ab}	72.10±1.21 ^a	64.13±1.70 ^c	**
Crude protein (CP)	68.26±0.87 ^b	67.88±0.84 ^b	71.04±0.28 ^a	72.30±0.87 ^a	64.55±0.98 ^c	**
Crude fiber (CF)	75.46±0.67 ^a	75.32±0.56 ^a	76.34±0.38 ^a	76.65±0.58 ^a	68.11±1.33 ^b	**
Ether extract (EE)	38.97±0.48 ^{ab}	37.90±0.56 ^b	40.66±0.91 ^a	41.35±1.02 ^a	35.21±0.79 ^c	**
Nitrogen free ext. (NFE)	76.11±1.20 ^{ab}	76.03±1.18 ^{ab}	78.47±0.67 ^a	80.15±1.75 ^a	72.02±1.69 ^b	**
<u>Nutritive value :</u>						
TDN	64.77±0.97 ^{ab}	64.17±0.8 ^{2b}	66.58±0.65 ^{ab}	67.5±1.04 ^a	60.54±1.31 ^c	**
DCP	10.77±0.14 ^b	10.71±0.14 ^b	11.21±0.12 ^a	11.41±0.13 ^a	10.19±0.15 ^c	*
ME (Kcal/ kg DM) ¹	2830.9±17.6 ^b	2823.9±31.8 ^b	2901.9±9.4 ^{ab}	2958.3±16.4 ^a	2686.3±14.3 ^c	*
<u>Nitrogen utilization:</u>						
N-intake (g/day)	2.98±0.04 ^d	3.42±0.04 ^a	3.15±0.02 ^c	3.31±0.02 ^b	2.74±0.02 ^e	**
Fecal-N (g/day)	0.94±0.01 ^{bc}	1.10±0.02 ^a	0.91±0.02 ^c	0.91±0.02 ^{bc}	0.97±0.02 ^b	**
Urinary-N (g/day)	1.12±0.04	1.11±0.05	1.10±0.05	1.14±0.07	0.96±0.06	NS
N-digested (g/day)	2.03±0.05 ^c	2.32±0.05 ^{ab}	2.23±0.03 ^b	2.39±0.04 ^a	1.77±0.04 ^d	**
N-retained (g/day)	0.91±0.01 ^c	1.21±0.01 ^{ab}	1.135±0.03 ^b	1.25±0.04 ^a	0.80±0.03 ^d	**
N-balance (g/day) % of N-intake	30.54±0.46 ^b	35.46±0.68 ^a	36.01±1.15 ^a	37.83±1.56 ^a	29.42±1.5 ^b	**

^{a, b, c, d} Means in the same row bearing different letters, differ significantly (P< 0.05).

¹ME (Kcal/ kg DM) = (0.588 + 0.164 X) 239, Where X is the dry matter digestion of the offered diet.

Experimental diets P1, P2, P3 and P4 supplemented with 1% Basil, chamomile, fennel and ginger, respectively.

NS = not significant

* P< 0.05

** P < 0.01

Table 4 : Effect of dietary supplementation with some medicinal and aromatic plants on chemical composition of hard and soft feces of growing NZW rabbits.

Chemical composition of feces (%)	Experimental diets					Significance
	C	P1	P2	P3	P3	
Soft feces						
Dry matter (DM)	35.01±2.02	36.24±1.26	36.02±0.83	35.72±0.86	35.23±0.85	NS
DM basis (%) :						
Crude protein (CP)	28.24±1.22 ^c	30.92±0.91 ^{ab}	31.26±1.20 ^{ab}	33.00±0.57 ^a	26.14±0.82 ^c	**
Ether extract (EE)	2.75±0.21	2.64±0.07	2.51±0.15	2.79±0.37	2.69±0.17	NS
Crude fiber (CF)	16.59±1.24 ^{ab}	13.91±0.69 ^{bc}	14.78±0.89 ^b	13.42±0.70 ^c	18.32±0.84 ^a	*
Ash	8.49±0.21	7.68±0.33	8.24±0.38	8.11±0.58	7.32±0.40	NS
Hard feces						
Dry matter (DM)	62.61±1.79 ^a	60.22±1.76 ^{ab}	59.07±1.58 ^c	59.48±1.58 ^{bc}	58.72±1.81 ^c	**
DM basis (%) :						
Crude protein (CP)	13.65±0.15	12.18±0.51	12.69±0.80	12.06±0.21	14.29±0.93	NS
Ether extract (EE)	3.28±0.23	3.09±0.1	3.52±0.32	3.12±0.014	3.48±0.26	NS
Crude fiber (CF)	23.55±0.24	21.64±0.82	23.08±0.85	22.81±0.93	24.19±1.25	NS
Ash	10.22±0.43	10.68±1.25	11.01±0.40	11.31±0.42	11.82±0.38	NS

^{a, b, c, d} Means in the same row bearing different letters, differ significantly (P < 0.05).

Experimental diets P1, P2, P3 and P4 supplemented with 1% Basil, chamomile, fennel and ginger, respectively.

NS = Not significant

* P < 0.05

** P < 0.01

Table 5 : Effect of dietary supplementation with some medicinal and aromatic plants on carcass traits and internal organs relative to preslaughter weight of growing NZW rabbits.

Items	Experimental diets					Significance
	C	P1	P2	P3	P4	
Preslaughter weight (g)	1947±11.27 ^c	1966±19.47 ^c	2065±12.5 ^b	2147±14.3 ^a	1626±12.5 ^d	**
Hot carcass weight (g)	1138.0±21.12 ^c	1161.0±23.41 ^c	1251.2±6.57 ^{ab}	1317.5±4.41 ^a	914.5±19.18 ^c	**
Dressing (%)	58.45 ± 1.87 ^b	59.05±1.52 ^b	59.14 ± 2.35 ^b	61.36± 1.35 ^a	56.24 ± 1.37 ^c	**
Cold carcass weight (g)	1122.1±15.8 ^c	1142.4±19.6 ^c	1231.8±11.9 ^b	1298.8±13.8 ^a	899.8±12.4 ^d	**
Carcass drip loss (%)	1.397 ± 0.23	1.602 ± 0.14	1.551± 0.28	1.419±0.26	1.607 ± 0.18	NS
Alimentary tract full (g)	279.46±7.8 ^{ab}	287.49±8.7 ^a	292.4±6.4 ^a	299.73±6.4 ^a	262.28±4.9 ^b	*
<u>Alimentary tract as % of body weight:</u>						
Full	14.35±0.4 ^b	14.62±0.41 ^b	14.17±0.39 ^b	13.96±0.21 ^b	16.13±0.22 ^a	**
Empty	0.94±0.04 ^{ab}	0.95±0.04 ^{ab}	0.93±0.02 ^{ab}	0.85±0.03 ^b	1.03±0.014 ^a	*
<u>Giblets weight (%) of body weight:</u>						
Liver (%)	2.21±0.09 ^b	2.42±0.12 ^{ab}	2.56±0.14 ^{ab}	2.67±0.13 ^a	2.77±0.11 ^a	*
Kidneys (%)	0.55±0.02	0.57±0.009	0.56±0.02	0.54±0.02	0.54±0.22	NS
Spleen (%)	0.03±0.004	0.028±0.001	0.029±0.002	0.029±0.003	0.03±0.002	NS

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Experimental diets P1, P2, P3 and P4 supplemented with 1% Basil, chamomile, fennel and ginger, respectively.

NS = Not significant

* P< 0.05

** P < 0.01

Table 6 : Effect of dietary supplementation with some medicinal and aromatic plants on some blood serum constituents of growing NZW rabbits.

Item	Experimental diets					Significance
	C	P1	P2	P3	P4	
Serum constituents :						
Total protein (gm/dl)	6.37±0.27	5.95±0.16	7.87±0.78	6.39±0.48	6.39±0.47	NS
Albumen (gm/dl)	3.97±0.10 ^b	4.29±0.09 ^a	4.037±0.12 ^b	4.53±0.09 ^a	4.05±0.19 ^{ab}	*
Globulin (gm/dl)	2.39±0.3 ^b	1.68±0.23 ^b	3.83±0.66 ^a	1.86±0.45 ^b	2.34±0.38 ^b	*
Urea	59.97±0.94	58.32±1.56	65.58±4.39	63.82±6.35	69.34±3	NS
Creatinine	0.91±0.03	1.027±0.09	0.93±0.13	0.79±0.07	1.12±0.15	NS
GOT(AST)	66.99±1.6 ^c	77.30±5.76 ^{ab}	80.87±5.63 ^a	65.56±1.89 ^c	85.49±1.64 ^a	**
GPT(ALT)	74.9±2.17 ^{ab}	69.61±2.25 ^b	70.97±3.48 ^b	78.05±2.01 ^a	75.37±4.5 ^{ab}	*
Total lipids (mg/dl)	86.4±2.03 ^a	88.05±2.05 ^a	95.34±4.79 ^a	50.80±2.11 ^b	49.95±3.1 ^b	**
Cholesterol (mg/dl)	62.9±1.77 ^a	64.43±2.26 ^a	62.65±2.31 ^a	43.79±2.53 ^b	46.5±1.91 ^b	*

^{a, b, c, d} Means in the same row bearing different letters, differ significantly (P< 0.05).

Experimental diets P1, P2, P3 and P4 supplemented with 1% Basil, chamomile, fennel and ginger, respectively.

NS = not significant

* P< 0.05

** P < 0.01