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Effect of adding some medical plants on some productive performance traits of Japanese Quail.

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Effect of adding some medical plants on some productive performance traits of Japanese Quail.

Riyed K . Mossa[1], Majid H. Al-Asadi[1], and Mohammed H . Saleh[2]

[1]Animal Production Department, College of Agriculture, University of Basrah , Basrah, Iraq

[2]Animal Production Department, College of Agriculture, University of Basrah, Kut, Iraq.

Email:barcaalwasity@yahoo.com

Abstract This study was conducted in the field quail of the Agriculture College/University of Basrah for the period from 24/11/2018 to 04/01/2019 to study the effect of adding different levels of dietary Marjoram (*Origanumvulgarae*) and (*Rosmarinus officinalisL*) on some productive of Japanese Quail in the study (450) chick . Unsexed one day old chicks were used at an initial weight 8.5 g . The chicks were randomly distributed into Ten treatments each treatment contained 45 chicks with three replicates each one has 15 chicks, the treatments as the following T1,T2,T3,T4,T5,T6,T7,T8,T9,T10 (Control, Adding 5 g powder of marjoram leaves from one day to 21 days , Add 5 g of marjoram powder from the age of 22 to 42 days, Adding 5 g of rosemary leaves powder from 1 day to 21 days , Adding 5 g of rosemary leaves from 22 to 42 days , Adding 2.5 g powdered leaves of marjoram and 2.5 g of rosemary leaves from 1 day to 21 days , Adding 2.5 g powdered leaves of marjoram and 2.5 g of rosemary leaves from 22 to 42 days , Adding 5 g of powder of marjoram leaves from one day to the end of the experiment , Adding 5 g of rosemary leaves powder from one day to the end of the experiment , Adding 2.5 g powder of marjoram leaves and 2.5 g of rosemary leaves from one day to the end of the experiment. There was a significant ($p \leq 0.05$) increase in the final body weight and cumulative weight gained, and a significant ($p \leq 0.05$) improvement in the cumulative feed conversion ratio compared with control treatment, while no significant ($p \leq 0.05$) differences were found in the amount of feed intake.

1-Introduction

Medicinal plants have been used in different parts of the world. The proportion of the world population who depend on plants is about 21% as a source of food and medicine [1]. The use of medicinal plants has been spread for centuries as food and some of these plants have been used effectively in human life [2] , because they contain effective substances such as flavonoids, terpenides, phenols,carotenoids and soaps [3]. Recently, medicinal plants are widespread in poultry feed which have become alternatives to antibiotics prepared by WHO. Marjoram is a medicinal plant belongs to the oral family that plays an important role in inhibition of cancer cells and removal of free radicals through its antioxidant activity [4] , adding that [5] The addition of Marjoram's powder leaves to broccoli at different levels resulted in a significant increase in body weight and rate of increase in weight, improvement

in food conversion coefficient and decrease in feed consumption at 42 days. The Rosemary is a medicinal plant that acts as an anti-microbial and anti-inflammatory agent to contain the cathese [6] . The results [7] showed a significant increase in the addition of rosemary leaves powder to broiler diets at different levels of body weight, weight increase, decrease in feed consumption rate and significant improvement in dietary conversion efficiency. This research aims to identify the effect of adding marjoram leaves powder , rosemary leaves powder and their mixture in feed on the productive qualities of Japanese quail.

2-Materials and Methods

The present study was conducted at quail's farm of Agriculture College/University of Basra for the period from 24/11/2018 to 04/01/2019 to evaluate the effect of adding different levels of dietary Marjoram (Origanum vulgarae) and Rosmarinus officinalis) on some productive of Japanese Quail birds .The study includes (450) chicks aged one day old of brown colored quail with a mean body weight 8.5g/birds. They were randomly distributed in to ten treatments each treatment contained 45 chicks with three replicates each one has 15 chick

2-1Chick Management

The chicks were placed in locally manufactured three floors iron batteries, each of which had a cage size (75 x 70 x 45 cm) (length x width x height), with a 4 liter plastic container. The feed was placed in a cylindrical container, Air fans were used for ventilation , water and feed were available free of charge and there were no casualties during the trial period.

2-2Nutrition

In the first three weeks, birds were fed 22.94% crude protein and 2948 kcal / kg of energy represented and a growth rate of 22- 42 days containing 21.61% crude protein and 2916 kcal / kg energy, and the feed was supplied by the Faculty of Agriculture's feed plant at Basrah University . The birds were fed from the age of 42 till the end of the experiment on the production process, which contained 20.03% crude Ptotien and 2904 kcal / kg representative energy (Table1)

Table 1. Energy level and protein for Quail diets

Experiment diet composition	Metabolizable energy (ME) (kcal/kg)	Crude protein (CP) %
Starter 1-7pre	2003	23
Starter 8-21	2948	22.49
Grower 22-42	2916	21.61

2-3Experimentparameters

10 empirical transactions were used in which experimental treatments were distributed as follows:1 (control) , 2.Adding 5 g of powder of marjoram leaves from 1 day to 21 days , 3. Adding 5 g of marjoram leaves powder from 22 to 42 days , 4. Adding the addition of 5 g of powdered rosemary leaves of rosemary from the age of one day to the age of 21 days , 5. Adding 5 g of powdered rosemary leaves from 22 to 42 days , 6.Adding 2.5 g of marjoram leaves powder and 2.5 g of rosemary leaves powder from the age of one day to 21 days ,7. Adding 2.5 g of rosemary leaves power and 2.5 g of Marjoram leaves powder from the age of 22 to 42 days , 8. Adding 5 g of marjoram leaves powder from one day to the end of the experiment , 9. Adding 5 g of rosemary leaves powder at the age of one day till the end of the experiment ,10. Adding of 2.5 g of Marjoram leaves powder and 2.5 g of Rosemary leaves powder from the age of one day till the end of the experiment.

2-4Marjoram and Rosemary

Using Marjoram and Rosemary leaves powder after they were obtained from the local markets in Wasit province after they were completely dried and grinded.

2-5Attributes studied

Attributes up to 42-day bird life.

2-5-1 Live weight
The Quail birds have been weighed by using a sensitive balance of two decimal places.
The weight of the birds was calibrated for two hours before weight by raising the feed.

2-5-2The increase in weight
The increase in weight achieved for birds was calculated according to the following equation: Weight gain (g) = Vivo weight at the end of the period - the body weight at the beginning of the period [8]

2-5-3Amount of feed consumed
The amount of feed consumed was calculated by the weight of the remaining feed at the end of the period and subtracted from the quantity provided at the beginning of the period according to the following equation:Total feed (g) = Amount of feed at the beginning of the period - Fodder remaining at the end of the period.
2-5-4 feed conversion ratio
The food conversion coefficient was calculated based on the weight increase from 1 day to 42 days:

$$\text{Feed conversion coefficient} = \frac{\text{Amount of feed consumed during the period (g)}}{\text{Increase in weight during the same period (g)}} \quad [9]$$

2-6-Statistical analysis
The results were statistically analyzed using SPSS (SPSS., 2006) and the results were compared using the lowest adjusted significant difference (R.L.S.D)

3-Results and Discussion

3-1 Body weight and weight gain
Table (2) shows the effect of adding powdered Marjoram leaves and Rosemary and mixed in the body weight rates of Japanese Quail birds up to the age of 6 weeks, and the table shows a significant increase ($p \leq 0.05$) to add marjoram in the rates of live body weight of the Japanese Quail bird in various significant treatment (2 : 8) in ages (2, 4, 6) weeks morally on the third treatment and control treatment .The third treatment and the control treatment did not differ significantly ($p \leq 0.05$) in the weeks (2, 4) but increased in the sixth week reached to (225.85, 215.06) g respectively ($p \leq 0.05$) .The reason of adding Marjoram leaves power is attributed to its ability to increase the efficiency of digestion through the secretion of a group of Enzymes Lipase, Protease and Amylase that have an important role in digestion and absorption through its prominent role in the analysis of carbohydrate food components , oily Proteins and saliva , as well as calm stomach and digestive system, improve appetite [10] Or may be due to moral improvement to contain marjoram at a high level of quality protein, which contains on essential amino acids, especially methionine [11] consistent with both results [5; 12 ; 13 ; 14 ; 15] .
Table 2 shows a significant effect ($p \leq 0.05$) when adding Rosemary leaves powder in body weight rates for Japanese Quail birds in different treatments and for all ages . Treatment (4, 9) at age (2, 4, 6) significantly exceeded the treatment of the fifth and control treatment Moral fifth treatment and control treatment did not differ in the weeks (2, 4), but significantly ($p \leq 0.05$) exceeded the sixth week amounted to (224.52, 215.06) g .Respectively , Excellence may be attributed to the role of the Rosemary in regulating metabolism and digestion To contain his papers on the effective materials represented carnosol ،caffeic , carnosic acid and borneol Which Stimulates the secretion of digestive juices in the gastrointestinal tract , thus maximizing nutrient utilization [16] . Or possibly contain

medicinal plants on Natural materials Which can promote the health and overall performance of birds and thus improve body weight [2] . These findings are consistent with both [7, 17, 18, 19]. The effect of the mixture showed no significant differences ($p \leq 0.05$) between treatment (6, 10) in all ages ,but significantly exceeded the seventh treatment and treatment of control. Also, no significant difference ($p \leq 0.05$) was observed in the seventh treatment and control at the age of (2) The seventh treatment was significantly ($p \leq 0.05$) higher at age (4, 6) weeks compared to control treatment (145.59, 233.24) (140.49, 215.06) g, respectively. The effect of adding powdery marjoram leaves and rosemary and Their mixture in rates The increase in weight We notice from the table (3) No significant ($p \leq 0.05$) differences treatment for adding transactions marjoram and rosemary for the period (1-2) compared with control but a significant ($p \leq 0.05$)superiority was observed for the treatment of the mixture (10,6) on the control treatment, which amounted to (55.76, 55.71, 53.04) on respectively ($p \leq 0.05$). There was also a significant superiority of all factors of adding marjoram (8,3,2) in the rest periods (3-4, 5-6, 1-6) respectively , where the highest value of the eighth treatment amounted to (88.46, 82.56, 226.29) g Compared to the control treatment that reached (79.04, 74.57, 206.66)g respectively. The reason of this superiority was attributed to Marjoram transactions to contain Marjoram on flavonoids which have a similar structure and function to steroid hormones [20] as a n that Hormones increase the metabolic rate of feed being constructivism hormones play an important role in Promote body growth and thus increase the synthesis of structural proteins in the body muscles [21] . Flavonoids also act as natural oxidants in the body as they enter into some formulations Enzymes Glutathione Peroxidase Which works to protect tissues from danger Peroxides and prevent the demolition of the protein s body and then to achieve the increase of the grains in favor of the body of birds [22]As well as the role of active substances in Marjoram (Thymol and Carrefour), which have a significant role in discouragement .The number of harmful Bacteria in the Intestines that compete with the host on food and contrary to the trend will increase the presence of beneficial bacteria and spread to the mucus layer spread over the network of myosin fiber covering the Intestinal cells as these provide. The net environment and medium are suitable for their growth, reproduction and production of short-chain organic acids by both Bacteria Bifidobacterium and Lactobacilli in the intestines that improve the movement of the droplets and increase reproduction Intestinal cells and blood flow in the mucous layer of the gastrointestinal tract and when absorbed by the intestinal wall Will enter the bloodstream and become a source of energy in the body [23]The results were consistent with [5 ; 15 ; 17] .

Table 2. Effect of Marjoram, Rosemary leaves powder and powder mixture in the diets on average weekly body weight g / Quail Japanese.

Treatment	**second week**	**fourth week**	**sixth week**
T1	61.44 ± 0.60 c	140.49 ± 1.45 e	215.06 ± 1.9 5e
T2	63.66 ± 0.64 ab	151.55 ± 1.41 bc	235.88 ± 2.35 abc
T3	61.63 ± 0.71 c	144.14 ± 1.16 de	225.85 ± 2.52 d
T4	63.61 ± 0.76 ab	150.49 ± 0.91 c	231.67 ± 2.52 c
T5	61.38 ± 0.80 c	143.47 ± 1.46 de	224.52 ± 2.43 d
T6	64.16 ± 0.60 a	155.14 ± 1.14 ab	237.24 ± 2.10 ab
T7	61.31 ± 0.82 c	145.59 ± 1.02 d	233.24 ± 1.89 bc
T8	63.66 ± 0.62 ab	152.12 ± 1.16 bc	234.69 ± 2.51 abc
T9	63.59 ± 0.69 ab	151.48 ± 1.46 bc	233.52 ± 2.06 bc
T10	64.11 ± 0.62 a	156.43 ± 1.46 a	238.62 ± 2.21 a
significant level	*	*	*

Experiment parameters: **T1** Transaction control. **T2** By adding 5 g / kg feed of Marjoram leaves powder for the period from 1 day to 21 days **,T3** by adding 5g/kg feed of Marjoram leaves powder feed for 22 days to 42 days ,**T4** by adding 5g/kg feed of Rosemary leaves powder feed for the period from 1 day to 21 days **,T5** by adding 5g/kg feed of Rosemary leaves powder feed for 22 days to 42 days ,**T6** By adding 2.5 g / kg fodder of Marjoram leaves powder 2.5 g / kg feed of Rosemary feed powder for the period from 1 day to 21 days .**T7** By adding 2.5 g/kg feed of Marjoram leaves powder and 2.5 g / kg feed of Rosemary leaves powder for 22 days to 42 days .**T8** By adding 5 g / kg feed of Marjoram leaves powder for the period from one day to the end of the experiment **.T9** Add 5 g / kg of coriander leaves powder for the period from one day to the end of the experiment **T10** addition Powder of marjoram leaves 2.5 g / kg ghee leaf powder and powder 2.5 g / kg feed for the period from one day to the end of the experiment .

*Means that there are significant differences between transactions at the significant level ($p \leq 0.05$)
The values in each transaction represents (Arithmetic mean)"Standard error.
Different letters within the samecolumnindicatea significant difference

The effect of adding rosemary powder was significantly higher for the added treatments (9,5,4) than the control treatment in periods (3-4, 5-6, 1-6). The ninth treatment for period (1-6) was significantly higher compared to the fifth treatment and control where it was (225.12, 216.12 and 206.66) respectively, with no significant ($p \leq 0.05$) differences between them and the fourth treatment. These results were consistent with [7 , 19]. This superiority may be attributed to the contents of the rosemary of essential oils containing active compounds and effective anti-oxidant and anti for microbes and antibiotics for the fungus and thus improve the utilization of nutrients to the diets of birds, or perhaps back To the beneficial effect of rosemary plants to the presence of phenolic compounds, which are inhibiting the activity of fungi and harmful bacteria and this activity is due to the activity of thymol compounds and Carcacrol Found in the essential oils of these plants [24] .
The effect of the mixture showed significant ($p \leq 0.05$) superiority for all additive treatments (6, 7, 10) in all periods (1-2, 3-4, 5-6, 1-6) on treatment of control Except for the sixth treatment, for which there were no significant ($p \leq 0.05$) differences and the control treatment parameters (1-2). There were also no significant ($p \leq 0.05$) differences between treatment (7, 10) in all periods

Table 3. Effect of Marjoram leaves powder ,Rosemary leaves powder and powder mixture in the diets on the weight gain gm for Japanese Quail .

Treatment	1-2week	3-4 week	5-6 week	Cumulative 1-6 week
T1	53.04 ± 0.609 b	79.04 ± 2.057 f	74.57 ± 2.326 c	206.66 ± 1.128 e
T2	55.26 ± 0.649 ab	87.89 ± 1.268 bcd	84.33 ± 1.394 ab	227.48 ± 1.358 abc
T3	53.23 ± 0.718 b	82.51 ± 0.450 ef	81.71 ± 1.399 ab	217.45 ± 1.459 d
T4	55.21 ± 0.768 ab	86.87 ± 1.389 cd	81.18 ± 2.410 ab	223.27 ± 1.507 c
T5	52.98 ± 0.807 b	82.09 ± 1.230 ef	81.05 ± 2.843 ab	216.12 ± 1.406 d
T6	55.76 ± 0.606 a	90.98 ± 0.542 ab	82.09 ± 1.191 ab	228.84 ± 1.215 ab
T7	52.91 ± 0.828 b	84.27 ± 0.542 de	87.65 ± 1.231 a	224.84 ± 1.094 bc
T8	55.26 ± 0.620 ab	88.46 ± 1.577 abc	82.56 ± 2.336 ab	226.29 ± 1.449 abc
T9	55.19 ± 0.692 ab	87.88 ± 0.774 bcd	82.04 ± 1.135 ab	225.12 ± 1.189 bc
T10	55.71 ± 0.628 a	92.32 ± 1.503 a	82.19 ± 2.055 ab	230.22 ± 1.279 a
significant level	*	*	*	*

Experiment parameters: **T1** Transaction control. **T2** Add the powder of marjoram leaves by 5 g / kg feed for the period from 1 day to 21 day **T3** Add powder of marjoram leaves by 5 g / kg feed for 22 days to 42 days , **T4** Add powdered rosemary leaves by 5 g / kg feed for the period from 1 day to 21 days **T5** Add powdered rosemary leaves by 5 g / kg feed for 22 days to 42 days **T6** Add powder of marjoram leaves by 2.5 g / kg fodder and powder of rosemary leaves by 2.5 g / kg feed for the period

from 1 day to 21 days **T7** Powder of paprika leaves 2.5 g / kg garnish leaves and powder 2.5 g / kg feed for 22 days to 42 days **T8** Add the powder of marjoram leaves by 5 g / kg feed for the period from one day to the end of the experiment **T9** Add 5 g / kg of coriander leaves powder for the period from one day to the end of the experiment **T10** addition Powder of marjoram leaves 2.5 g / kg ghee leaf powder and powder 2.5 g / kg feed for the period from one day to the end of the experiment .
*Means that there are significant differences between transactions at the significant level ($p \leq 0.05$)
The values in each transaction represent (arithmetic mean)"Standard error).
Different letters within the samecolumnindicatea significant difference

3-2Feed intake and feed conversion ratio

Table (4) shows the effect of addition Marjoram leaves and powdery rosemary and Their mixture in the In feeders on feed intake week / bird and the table shows There was no significant effect ($p \leq 0.05$) to add marjoram powder (2, 3, 8) to the diets compared to control treatment in all periods (1-2, 3-4, 5-6 1-6) These results were agreed with both [12 ; 24 ; 25 ; 26].

Table (4) showed that there was no significant effect ($p \leq 0.05$)in addition to the addition of rosemary powder in (4, 5, 9) to the control compared to control treatment in all periods. The results were consistent with [17; 18 ; 27 ; 28 ; 29] .

The effect of the mixture from Table (4) shows no significant ($p \leq 0.05$) differences between the mixture (7, 6, 10) and the control treatment in all periods .

Table 4. Effect of Marjoram leaves powder ,Rosemary leaves powder and mixture in feed rations on the weekly consumption rate and cumulative g / bird / week for Japanese Quail`.

Treatment	1-2 week	3-4 week	5-6 week	Cumulative of 1-6 week
T1	73.34 ± 1.137	209.66 ± 5.783	275.66 ± 1.438	558.67 ± 13.209
T2	74.08 ± 1.334	207.26 ± 1.140	273.26 ± 1,723	554.61 ± 7.260
T3	73.62 ± 1.189	212.51 ± 1.376	275.41 ± 0.127	561.54 ± 0.378
T4	73.96 ± 1.382	208.95 ± 0.880	274.15 ± 1.091	557.06 ± 5.666
T5	73.24 ± 0.984	211.94 ± 2.181	275.90 ± 1.330	561.09 ± 3.677
T6	74.28 ± 0.983	206.93 ± 1.453	273.56 ± 0.379	554.77 ± 1.943
T7	73.53 ± 1.136	211.18 ± 4.448	275.85 ± 1.080	560.57 ± 11.234
T8	74.07 ± 0.648	207.63 ± 0.696	275.38 ± 1.567	557.08 ± 1.496
T9	74.38 ± 0.903	208.11 ± 0.921	275.77 ± 0.945	558.26 ± 0.572
T10	74.36 ± 0.618	207.27 ± 0.022	0.335 ± 272.88	554.52 ± 1.480
significant level	**NS**	**NS**	**NS**	**NS**

Experiment parameters: **T1** Transaction control, **T2** by adding 5 g / kg feed of Marjoram leaves powder for the period from 1 day to 21 day **,T3** by adding 5 g / kg feed of Marjoram leaves powder for 22 days to 42 days , **T4** by adding 5 g / kg feed of Rosemary leaves powder for the period from 1 day to 21 days, **T5** by adding 5 g / kg feed of Rosemary leaves powder for 22 days to 42 days, **T6** by adding 2.5 g / kg fodder of Marjoram leaves powder and 2.5 g / kg feed of Rosemary leaves powder for the period from 1 day to 21 days, **T7** Powder of paprika leaves 2.5 g / kg garnish leaves and powder 2.5 g / kg feed for 22 days to 42 days, **T8** by adding 5 g / kg feed of Marjoram leaves powder for the period from one day to the end of the experiment, **T9** by adding 5 g / kg of coriander leaves powder for the period from one day to the end of the experiment, **T10** by adding 2.5 g / kg of Marjoram leaves powder and ghee leaves powder of 2.5 g / kg feed for the period from one day to the end of the experiment .
*Means that there are significant differences between transactions at the significant level ($p \leq 0.05$)
The values in each transaction represent (arithmetic mean)"Standard error)
Different letters within the samecolumnindicatea significant differenc

The rate of food conversion Table (5) indicates that there was no significant ($p \leq 0.05$) difference in the addition of powder of marjoram leaves for 1-2 weeks, while significant effect ($p \leq 0.05$) was observed for the rest of the periods (3-4, 5-6, 1-6), respectively. Where the treatment was significantly higher (2, 3) reached (2.35 ،2.34) kg feed / kg weight gain respectively (2.43, 2.46 kg / kg) respectively, in the period (3-4, 1-6)) Compared to the control treatment of (2.65, 3.70, 2.70) kg feed / kg weight gain respectively, The reason for this superiority is the treatments to add marjoram to the oils in it if. improved ability to digest protein and fat Because it contains compounds that stimulate the action of the thyroid gland [30;31].

As well as increased pancreatic secretion of Lopeze and amylase to digest to digest protein and fat inside the small intestine, particularly ileum [32] . Or may be due to the role of many The active substances in the marjoram (Anethole , Thymol , Carvacrol) Which may be stimulating for growth [33]. As for the addition of powdered Rosemary in the fishes of quail birds from Table (5), there are no significant differences in rate of food conversion between the treatments of addition and control treatments in period (1-2) , however Significant effect ($p \leq 0.05$) was observed for the rest of the periods (3-4, 5-6, 1-6) respectively. Where the highest treatment was (9) and reached to (2.36, 2.48) kg feed / kg weight gain in the period (3-4, 1-6) , and significantly ($p \leq 0.05$)exceeded all treatment in the period (5-6) compared to the control treatment which reached (2.65, 3.70, 2.70) kg feed / kg weight gain. The results were consistent with [7 ; 19] that showed an improvement rate of food conversion when adding Rosemary powder to chicken broiler diets at different levels. This is because medicinal plants (Rosemary) contain flavonoids, which are effective compounds that have a positive effect on improving the efficiency of the rate of food conversion. They act as a Bacterial Antimicrobial agent, antifungal and other anti-inflammatory agents. These characteristics of flavonoids can reduce and inhibit Composition of aflatoxins and thus lead to high efficiency in improving digestion of food [34] . As for the effect of the mixture, there was no significant ($p \leq 0.05$) difference between the added treatments and the control treatment in the period 1-2 weeks. However, But an improvement in treatment was observed (6, 10) during the period (3-4, 1-6), reaching (2.27, 2.24) kg feed / kg weight gain (2.42, 2.40) kg feed / kg weight gain, respectively, compared with treatment (7 and control treatment) (2.50, 2.65) kg feed / kg weight gain (2.49 and 2.70) kg feed / kg weight gain respectively, and there were no significant ($p \leq 0.05$)differences between the treatment (6, 10) in all periods. Either in period (5-6) weeks was observed improvement in the efficiency of rate of food conversion of all the treatments of addition of the mixture in comparison to the treatment of control.

Table 5. Effect of Marjoram leaves powder ,Rosemary leaves powder and powder mixture in the diets on food conversion efficiency rate of feed g / g increased by weight Japanese quail birds.

Treatments	**1-2 week**	**3-4 week**	**5-6 week**	**Cumulative 1-6 week**
T1	1.38 ± 0.017	2.65 ± 0.142 a	3.70 ± 0.099 a	2.70 ± 0.024 a
T2	1.34 ± 0.019	2.35 ± 0.023 cd	3.24 ± 0.067 b	2.43 ± 0.018 cde
T3	1.38 ± 0.035	2.57 ± 0.014 ab	3.37 ± 0.056 b	2.58 ± 0.016 b
T4	1.33 ± 0.021	2.40 ± 0.047 bcd	3.38 ± 0.089 b	2.49 ± 0.002 c
T5	1.38 ± 0.002	2.58 ± 0.042 ab	3.41 ± 0.104 b	2.59 ± 0.020 b
T6	1.33 ± 0.007	2.27 ± 0.026 d	3.33 ± 0.052 b	2.42 ± 0.017 de
T7	1.39 ± 0.036	2.50 ± 0.040 abc	3.14 ± 0.032 b	2.49 ± 0.018 c
T8	1.34 ± 0.024	2.34 ± 0.039 cd	3.34 ± 0.100 b	2.46 ± 0.019 cde
T9	1.34 ± 0.030	2.36 ± 0.029 cd	3.36 ± 0.052 b	2.48 ± 0.013 cd
T10	1.33 ± 0.026	2.24 ± 0.035 d	3.32 ± 0.088 b	2.40 ± 0.016 e
significant level	**NS**	*****	*****	*****

Experiment parameters: **T1** Transaction control. **T2** by adding 5 g / kg feed of Marjoram leaves powder for the period from 1 day to 21 day **, T3** by adding 5 g / kg feed of Marjoram leaves powder for 22 days to 42 days , **T4** by adding 5 g / kg feed of Rosemary leaves powder for the period from 1 day to 21 days, **T5** by adding 5 g / kg feed of Rosemary leaves powder for 22 days to 42 days, **T6** by adding 2.5 g / kg fodder of Marjoram leaves powder and adding 2.5 g / kg feed of Rosemary leaves powder for the period from 1 day to 21 days, **T7** Powder of paprika leaves 2.5 g / kg garnish leaves and powder 2.5 g / kg feed for 22 days to 42 days, **T8** by adding 5 g / kg feed of Marjoram leaves powder for the period from one day to the end of the experiment, **T9** by adding 5 g / kg of coriander leaves powder for the period from one day to the end of the experiment ,**T10** by adding 2.5 g / kg feed of Marjoram leaves powder and ghee leaf powder and of 2.5 g / kg feed for the period from one day to the end of the experiment .

*Means that there are significant differences between transactions at the significant level ($p \leq 0.05$)

The values in each transaction represent (arithmetic mean)"Standard error).

Different letters within the samecolumnindicatea significant difference

4. Conclusions

inclusion of rosemary (Rosmarinus Officinalis) or marjoram (Origanum majorana) and their mixture and at different periods as a natural source of antioxidants improve body weight, weight gain, feed conversion ratio , Continuous addition treatments gave the best results compared to other treatment .

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